DAILY METAL REPORTER
MONTHLY SUPPLEMENT

METALS

Published Since 1929

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Reynolds Metals Company

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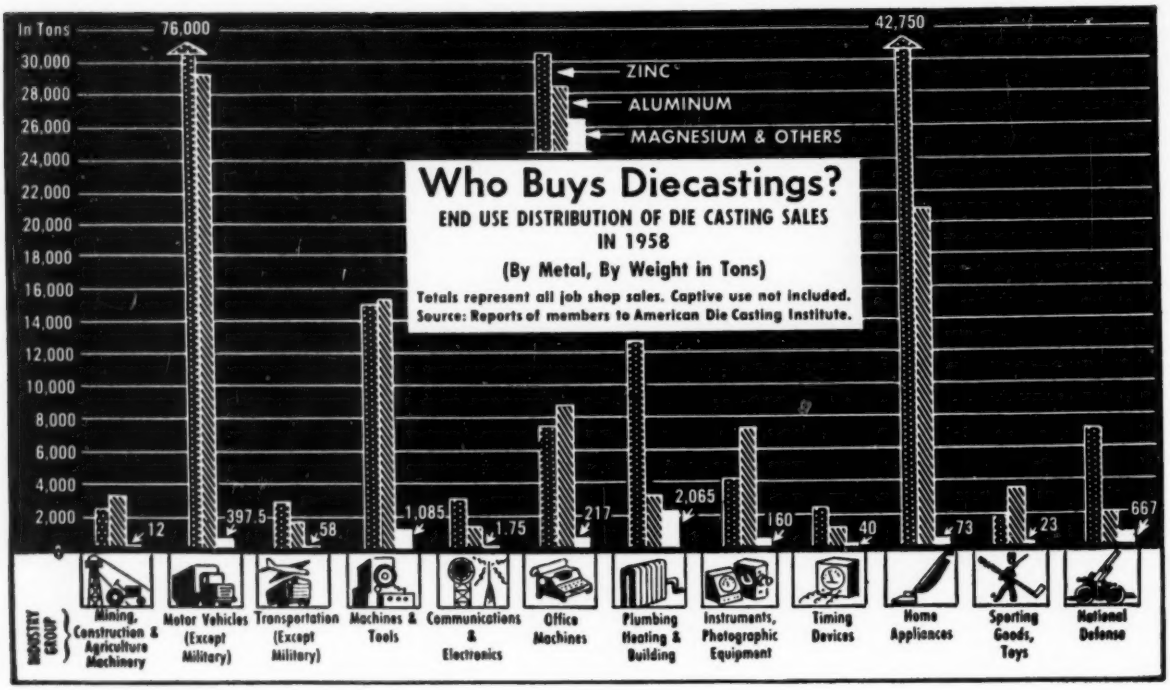
Arizona Copper Tariff Board

DOMESTIC METAL MARKET REVIEW

WASHINGTON REPORT

METAL STATISTICS

AUGUST
1959



these industries do!

Applications of zinc base die castings are steadily becoming more varied and more widespread. Today, it would be virtually impossible for anyone to go through an ordinary day's routine of living without using—directly or indirectly—an immense number of appliances, devices and services in which zinc alloy die castings form essential parts. The chart above shows sales by job shop die casters in 1958. The superior physical characteristics of zinc as a base metal for die castings is indicated by the fact that in 1958 67% of all die castings by weight, sold by job shops, were based on zinc.

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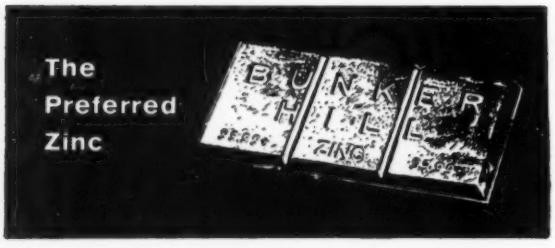

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Subscription
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DAILY METAL REPORTER
MONTHLY SUPPLEMENT
METALS

Registered U. S. Patent Office
Published Monthly Since 1929

Charles H. Lipsett
Publisher
Dr. J. Zimmerman
Editor
M. Goldfischer
Associate Editor

Monthly Supplement of Daily Metal Reporter August 27, 1959

AUGUST, 1959

Vol. 30 — No. 2

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METALS — 425 West 25th Street, New York 1, N. Y.
Published by the National Business Press, Inc.
Phone: WAtkins 4-0660
Cable Address: ATPUBCO, New York
Branches: Washington, Philadelphia, Chicago, Boston
London Office: 81 Highview Ave., Edgware, Middlesex, England
Cable Address: ATPUBCO, London
Affiliated Publications: Daily Metal Reporter, Daily Mill Stock Reporter, Waste Trade Journal, Waste Trade Directory, Standard Metal Directory, Mines Register, World's Waste Trade Directory, Sales (Weekly).

Two LINE *Editorials*

The National Institute of Health announces that ten monkeys were made ill by radio waves from an ordinary television set. Maybe it wasn't the waves but the program that made them sick.

* * *

A government bureau, after close study, announces that the world weighs 6,594,000,000,000,000,000 tons. Sometimes, when it's bearing down heavy on your shoulders, it seems heavier than that.

* * *

One way our Defense Department could save a lot of money would be to declare all our weapons obsolete as soon as they finish drawing the plans for them instead of waiting until after they have spent a few billion dollars making them.

* * *

It is not fair to say that the Soviet officials have broken all the agreements they have made. A careful tabulation shows that out of 52 promises they have made they have observed all but 50.

* * *

One of the controversial features of the proposed labor legislation is a clause making the embezzlement of union funds illegal. A lot of simple souls had been thinking that the embezzlement of anybody's funds had always been illegal.

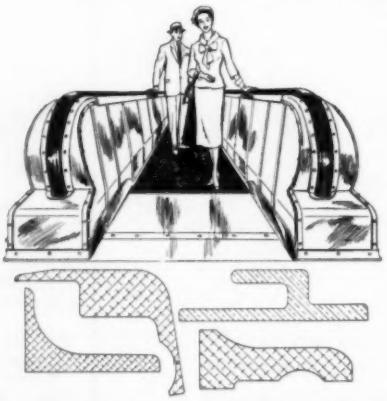
* * *

Premier Khrushchev says he can't understand Mr. Nixon's purpose in visiting Russia at this time. Hasn't anybody told Nikita that we'll be having a Presidential election over here in 1960?

BUSINESS IN MOTION

To our Colleagues in American Business . . .

At the new $7,000,000.00 Love Field air terminal, Dallas, Texas, travelers are transported to and from the terminal building to the loading fingers via the world's longest passenger conveyor system. In fact this "moving sidewalk" is the first one to be installed at an airport anywhere in the world. In operation since early last year, it has met with a high degree of public acceptance.



As you step on this "moving sidewalk" you will notice the broad use of aluminum extrusions. They are used as floor cove molding, handrail molding, spoon molding between balustrades and rubber carpet, and as a wall cove between handrail and wall. All told 22,000 lbs. of Revere Extruded Aluminum Shapes are used. Not only are these Revere Aluminum extrusions attractive and decorative but their satiny finish will remain so for years with an occasional soap and water cleaning the only maintenance required.

Hidden under the moving rail is the track made from 22,000 lbs. of Revere Extruded Bronze Shapes, fabricated to close tolerances and micro-finished, taking constant daily rugged wear in its stride.

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Washington Report

August 20, 1959

LEAD AND ZINC continued to occupy a prominent position in metal news from Washington during the month in review. Prodded by industry representatives and determined members of Congress, the Tariff Commission announced that it would initiate a study on the trend of imports of various lead and zinc products not subject to import restrictions. The Commission noted that "there have been reports from various sources that since the quotas on unmanufactured lead and zinc were put into effect rapidly rising imports of lead and zinc products, said to be attributable primarily to the existence of the quotas on unmanufactured lead and zinc, are rendering the quotas on unmanufactured lead and zinc ineffective."

Although gratified that the Tariff Commission is taking some action, a move is under way in the Senate to widen the scope of the probe. Senator Robert S. Kerr (Dem., Okla.) has submitted a resolution (S. R. 162) on behalf of himself and 13 other Senators, to direct the commission to include specific findings with regard to the current condition of the lead and zinc mining industries and as to what additional import restrictions (by way of increased duties or import quotas or both), need to be imposed on articles dutiable.

Probe Zinc Sheet Imports

The Tariff Commission has begun an investigation into imports of zinc sheets to see if they seriously threaten domestic competitors.

It will attempt to determine if zinc sheet imports should be regulated in the same manner as lead and zinc ore and metal imports, which are controlled by quotas established a year ago by President Eisenhower.

Ball Brothers Co., Munice, Ind., asked for the study July 14, the commission said. The company wanted the Federal agency to find out if present tariff rates are causing injurious increases in imports of zinc in sheets, including coated or plated sheets. The commission scheduled a public hearing for Nov. 3.

If the Tariff Commission finds rising imports threaten to damage the domestic industry, it can recommend higher duties or other steps designed to curb imports. The President then can accept or reject the recommendation.

Senators Urge Action

Sixteen Senators have joined in urging President Eisenhower to take positive action to help the depressed lead and zinc mining industry. Their letter was dispatched with an acknowledgement that since it was drafted the Tariff Commission has voluntarily opened an investigation of increased importation of lead and zinc products. But the Senators said this was "but one facet of the problem."

The letter said in part:

"In view of the fact that for 10 years the lead and zinc industry has been fighting for its life, that it has been severely injured, and continues to disintegrate under the constant impact of a high level of imports, it is hoped that a firm and effective means of maintaining this industry on a sound healthy basis can be established.

"It is strongly urged that a new administrative examination of the results of the application of existing quotas be made, with a view to rendering more effective aid to an industry that remains prostrate and without hope of adequate assistance under the present schedule of import regulations."

Mueller Supports Aid

Commerce Secretary Frederick H. Mueller also told Congress he was worried about the trend toward increased imports of lead and zinc products, since the imposition of quotas on the primary metals last year, and felt they should be stopped.

Testifying before the Senate Interior Committee, however, Mr. Mueller warned against Federal programs to aid the mining industry that might hurt the general economy.

"In this connection," he said, "we are concerned about measures which could be inflationary in character and which in the long run might hurt rather than help the industries concerned."

Mr. Mueller included in this area Government support programs which set prices above the present markets and establishment of prohibitively high tariffs, import quotas or embargoes.

The Commerce Secretary also said a Sugar Act quotas system is a possibility in the minerals industry, but that the chief drawback to its utilization is the difficulty of deciding what demand for the metals will be in any one year.

Senator Kerr, asserting that lead and zinc prices were substantially below the peril point as determined by the Tariff Commission, said there had not been a ton of lead and zinc produced in the tri-state area of Oklahoma, Kansas and Missouri for the past thirteen months.

Mr. Mueller said the facts cited by Mr. Kerr indicated something had to be done to help the domestic lead and zinc industry.

Chairman James E. Murray (Dem., Mont.), Senator Allan Bible (Dem., Nev.) and other committee members criticized Mr. Mueller for the tenor of his July letter to the House Interior Committee which they said indicated a feeling that the mining industry was doing all right.

Mr. Mueller said the letter was "unfortunate in its implications." He admitted that certain sections of the industry may be having difficulty and that he erred in not taking into consideration the effects of foreign operations in his earlier estimate of industry profits. Lead and zinc are among the soft spots, he said.

Seek Resources Appraisal

Senator Murray has introduced on behalf of himself and 25 co-sponsoring Senators, a bill to establish a Congressional-White House partnership to carry on a "continuous appraisal" of natural resources.

Patterning his proposal on the Federal Employment Act of 1946, the Montana Democrat unveiled a bill to create two groups — a council of resources and conservation advisers for the President, and a joint Congressional committee on resources and conservation. An annual report

(Continued on Page 10)

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Aluminum Versatility Spurs Growth

By JOHN H. KREY, Vice President, Reynolds Metals Company

JUST to be sure we have a frame of reference, let me quickly note that aluminum consumption in North America has increased from some 800,000 tons in 1946 to an estimated 2,400,000 tons for this year—nearly a three-fold increase.

Why is this so? Why is it that in so many industries the initial application becomes the opening wedge for the diversified and expanded use of the metal?

Example of Versatility

From its principal use as a piston metal in the automobile industry, it has moved on to the interior and exterior of the car, and now we are told that aluminum engines will soon appear.

You have seen the growing fleets of aluminum truck trailers and busses and the growing use of aluminum in ships and freight cars—evidence that it has now penetrated the principal fields of transportation.

In your own kitchen you have seen household foil become an item of every-day use, to be followed by a galaxy of rainbow-bright foil packages that are changing our nation's food distribution and cooking patterns.

A walk down Madison Avenue and up Park in New York shows you that aluminum curtain wall construction has arrived as the material for our finest buildings, and a walk down any street in the suburbs will confirm that you are now getting your electricity over aluminum, as well as copper, wires. Only a short time ago its use was confined to transmission wire.

Why is it that this material—confined in the layman's mind to pots and pans and airplanes only 15 years ago—has so successfully invaded so many major markets?

Rigid conduit pipe, used in the wiring of all large buildings, is a new aluminum product. For all practical purposes, so is baked enamel siding for houses, curtain wall for office and industrial buildings, a foil package for detergent soaps, aluminum bus bar, an aluminum can for beer, and an aluminum engine block.

Text of address delivered before the National Federation of Financial Analysts Societies, Montreal, Canada, on June 16, 1959.

There is nothing very startling about this particular list of newer products, except that I've chosen them to make this significant point:—the aluminum conduit entered the market to compete with steel; the painted siding with wood; the curtain wall with brick and cement; the detergent foil package with paper; the bus bar with copper; the aluminum beer can with glass; and the engine block with cast iron.

This set of examples indicates one side of our metal's versatility. But let me go further. In each case the users get an extra dividend—something which, for want of a better name, I'll label versatility-plus, or V-plus.

The aluminum conduit is the same price as steel. The V-plus is that it's one-third the weight of steel. The V-plus factors in the painted siding are that the costly job of painting over the years is greatly reduced or eliminated, it will not rot or warp, and it is immune to termites and other vermin.

In the detergent soap package, foil brings the product to the housewife in factory-fresh condition and the brilliance of foil packaging helps the sale on the store shelf. The bus bar is lighter, the beer keeps better and the engine brings savings to the motorist.

In recent months, you have been told in newspaper and magazine that the new aluminum motor block and engine is on its way—and there has been much curiosity on the part of the analyst as to the date on which this new power plant will go into production. Now, the significant point to me is not whether it will appear in one model or several, whether it will be in 1959 or 1960. Rather, it is the fact that this high volume, cost-conscious industry has made a decision to move towards aluminum.

"It goes without saying," says one automobile company official, "that the main advantage of aluminum engines is their lighter weight. Beyond that, of course, are many possibilities in the manufacturing area. Aluminum is easier to work than cast iron. Our ultimate target is the building of these engines at less cost than cast iron engines." Another said that an engine can be as much as 200 pounds lighter—so the chassis can be lighter. It's like a snowball rolling downhill.

A Better Power Plant

Here it is, then—a better, more efficient aluminum power plant, which automotive engineers now say is competitive in cost with cast iron. This does not come about by substituting 25c aluminum for 4c cast iron. It comes about because the automotive engineer has abondoned traditional assumptions and cost conclusions based on other metals.

And so it has been established—first—that aluminum, cast or extruded to fine tolerances in almost a finished product state, can be competitive with other metals, including cast iron, and—second—through these processes the labor and machining requirements are significantly reduced.

In a day when we are straining to overcome the effects of rising wages here and low wages abroad, a production material that can eliminate or sharply reduce costly machining and finishing operations now and tomorrow—carries with it a basic advantage. I do not think that the significance of this development will be lost to general industry!

A few years back, it was the aluminum industry that was promoting and doing the development work in the hope of encouraging aluminum's use in the automobile industry. Now, it is the engineering groups in the automobile business, consciously alert to aluminum's advantages, who are working and thinking in terms of aluminum. And so we see both industries now working on—not just the engine block and engine, but—

—aluminum bumpers that may weigh from 5 to 20 pounds a car and which may appear on a 1960 model.

—aluminum brake drums, without a steel insert and weighing some 30 pounds a car.

—cast aluminum wheels of which the brake drum is an integral part and on which the aluminum requirements per car would be in the order of 100 pounds.

I can't tell you if or when a high-powered V-8 engine, the bumper, the cast aluminum wheel or the radiator will be partially or fully adopted. What is of importance here is that

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the automotive industry is thinking in terms of aluminum and that these and other products are under active test and that each involves the use of from 5 to 100 pounds per car. Having said this, I shall forego the temptation to put numbers on these potential markets as they apply to the 6 million or more cars a year being produced.

But don't overlook the special V-plus for the motorist which will develop from the broader use of this lightweight metal in terms of car operating costs and acceleration and braking performance.

Aluminum and The Armed Services

Right here, it may be timely to mention the growing use of aluminum by the armed services. The tonnages at the moment is not substantial. One of the first of these new products is the Army's new armed personnel carrier, on which construction for several hundred units has recently begun. Each unit will use about 8,000 pounds. But the Army is interested in the factor of mobility. They are concerned with the fast, long-distance transportation of equipment, and its possible delivery by parachute from a plane in flight. Lightweight aluminum makes this possible! So trucks, undercarriages, armor plate, containers, bridges, personnel carriers and tanks, designed in aluminum, are part of the growing program for defense.

Then there are other V-plus factors that come into play. Aluminum vehicles take less maintenance. Replacement parts are lighter to ship and have superior storage characteristics. They are more manueverable on the battlefield. And in extreme Arctic conditions, where other metals would shatter more easily, aluminum armor plate actually gets stronger.

When I first heard of that V-plus I felt that outside of defense it had only a limited advantage of interest perhaps only to the Eskimo contractor, but I was wrong.

Last week the first transatlantic delivery of methane gas from here to England was successfully accomplished. The methane was carried in temperatures from 250 to 300 degrees below zero. I am sure you are aware of the high potential in this field for which aluminum is so well suited.

Building and Construction

The building and construction industry is currently the largest user of aluminum—over a half million tons in 1958. Here we have abundant opportunities to capitalize on the V-factors of our metal.

Colored baked enamel siding is becoming an interesting product to the prefabricators and the tract builders. It offers a wide range of designs and finishes. Initially, it is somewhat higher in cost than pine. It does not require repainting for a decade or more and so this presntly becomes a plus.

Aluminum windows, storm doors, ductwork, hardware, shingles, gutters, downspouts and insulation are now all standard products available through distributors. The use of all of these products in a single house requires 2500 pounds of aluminum. An average use per home today is about 40 pounds.

The building industry—made up of many trades and crafts, with individual restrictions and varying building codes—all tend—however unintentionally — to work against a quick adoption of new materials. To overcome these inertias—that is, to hasten the adoption of aluminum construction products and to highlight the total of aluminum's advantages in home construction—our industry is developing the sales concept of the aluminum house.

In our company, we call it the "House of Ease" and are promoting it with individual and tract builders on a nationwide basis. Less work, more comfort and lower maintenance. National Homes, the largest prefabricator of dwellings, is carring on a successful sales program along similar lines. The result of all this is that several thousand homes, using 1500 pounds or more of aluminum, have been sold throughout the United States during the past several months. Now the quantity is big enough to establish widespread architect, builder and consumer interest—a necessary prelude to nationwide acceptance.

But the aluminum industry seeks something more than aluminum copies of traditional materials. With our V-plus factor we can work towards new frontiers. Panelization or modular prefabrication in the residential field, large insulated structural roof panels and load-bearing structural wall panels — to eliminate framing — are a part of our present-day thinking.

I am sure you know that aluminum has replaced copper in overhead transmission cable. But are you aware of the gains made by our industry in primary and secondary distribution wire and service drops? Over 50 per cent of all the overhead wiring that you see being installed today along your city streets and into houses and commercial buildings is aluminum. Aluminum conductors are being used in such items as lift magnets, generator field coils, motor and transformer windings. The use of aluminum in bus bars is also growing.

Perhaps you can see the kind of thinking that goes on in the aluminum industry. Profitable experience has taught us to look deeper than the superficial costs and to ignore conventional design. Often we must approach a new application as if the product did not exist, and we were inventing it—in aluminum, of course.

The use of aluminum curtain wall for monumental and industrial building will continue to grow. That the new central offices of the Chase Manhattan Bank and the First National City Bank are both aluminum curtain wall is not without its significance to the architects and planners of the country.

In hotel construction, the new Hilton Denver, the Sheraton and Executive House in Chicago, and the Pittsburgh Hilton, are a further confirmation of the trend to aluminum. What is true in our cities is also true throughout the world.

Today, architects—like design engineers in the automotive industry—are thinking in terms of aluminum, and they have a new freedom in design and in color to spur their imagination.

Aluminum also helps to "keep them down on the farm." Universities are graduating agriculturalists in farm economics—young men who are familiar with the fact that the use of lightweight, heat-reflecting structures means a better animal yield from less feed and, therefore, more dollars and cents in the pocket.

Aluminum on the Road

Any extended automobile trip today will bring out the far-reaching changes that are taking place in our highway systems, and I hardly need add the contribution that aluminum is making for faster travel in the form of adequate lighting, readable signs, bridge and guard rails, and even aluminum chain link fencing. Yes, even fencing has its V-plus, which has been carefully determined by such professionals as the New York Highway and New Jersey Parkway Commissions. Overpasses by the thousands will be needed as this construction develops and aluminum has made its preliminary bid in this direction, as well. Designed in conventional patterns at first, our industry is now collaborating in the design of radically new structures in which lightweight, low maintenance factors are calculated to make them more than competitive during the period of use-

ful life. As in so many cases, it is the problem of continuing maintenance that is working on our side.

Let us look at another 300 million pound customer for aluminum—the electrical and communications industry. An executive in the utility industry recently told the Edison Institute that electrical sales 20 years from now might be five and a half times present levels—involving construction expenditures by the industry in the neighborhood of 150 billion dollars.

It's the covered, insulated or sheathed wiring that really uses the big tonnage of metal. Here, because of these covering specifications, the problem is more complex and the rate of progress correspondingly slower. We are, nevertheless, now in these fields and on our way.

In the electrical industry, at its present level of aluminum acceptance, we are disregarding the V-plus factors in our metal and talking straight price economics. One-half pound of aluminum costing 12½ cents has the same conductor capacity as one pound of copper costing 31 cents. That's why all transmission wire across the country is made of aluminum.

There is a close relationship between power usage and metal conductor requirements. We find established patterns of distribution, established standards and simple inertia resisting the broad adoption of aluminum. But these are slowly giving way to our metal's consistent pressures. That is why Alcoa purchased Rome Cable—to extend their line of products. And so other wire and cable manufacturers are now thinking in terms of a full wagon, which means more aluminum wire products.

Aluminum and Railroads

In the railroad industry, the greatest use of our metal currently is in the tank car. About 1500 cars a year, each using 8000 pounds of aluminum, are being constructed. Here, the noncorrosive factor combines with lighter weight to encourage the greater use of aluminum.

Gondola and covered hopper cars, using 15,000 pounds per car, are a potential market. Again, more expensive initially—aluminum would mean increased pay load because of its lighter weight, more diversified use because of aluminum's non-corrosive attribute, and less labor cost in maintenance.

In all of these new applications, it must be remembered that to dislodge a product in common use your product cannot merely be as good—it must be better.

You have seen news stories on the use of aluminum in tugs, small barges and lifeboats. It is now an accepted use in the design of superstructures for passenger ships. The Orient Lines' new "Oriana" is being designed to use 1000 tons of aluminum. It is stated that through this weight-saving the ship can carry one more deck than would be possible with steel construction.

With the advent of wider, heavier aluminum plate, it is not unrealistic to put under the heading of potential tonnage use the construction of aluminum tankers for coastal and intercoastal waterways and aluminum barges. You may not think of hatch covers as tonnage items. However, total weight of hatch covers of aluminum on one new large freighter is in the order of 100,000 pounds.

Piggy-back, Fishy-back

The truck and trailer industry will use more aluminum. Here the versatility factor of aluminum is pointed up by piggy-back and fishy-back operations. It is currently reported that 40 ships are being planned to accommodate so-called "roll-on, roll-off" containers. These containers, for both railroad and water transportation, are being made of aluminum.

Permit me to note briefly one more market in which the outlook for aluminum could not be brighter. Convenience foods is the term used nowadays to describe the preparation of food by processors in such a way as to minimize the work of the housewife.

The packaging industry is a multi-billion dollar business and it's tailor-made for aluminum's versatile properties. It's a silent, effective salesman on the shelves of super-markets. Advantageous in the quicker freezing of foods, superior in protecting them from dampness, heat and light—aluminum is all of these and a cooking utensil as well. A lusty member of the aluminum family, foil production runs to more than 200 million pounds each year. With the container packaging developments we see ahead, we expect this division of our industry to expand at least fourfold within the next 15 or 20 years.

I will do no more than mention the aluminum can—a large potential market that is going to be tough, but we've started with the oil can and we are now in the market testing stage with fruit juice cans and aerosols.

Now will I do more than identify our expanding role in the chemical and petroleum industry with such innovations as aluminum tanks for transportation of methane gas; heavy-end pipe that puts strength at the joints where it is needed, or the market potential in aluminum powder, particularly in the field of solid fuels. Yes, aluminum is a good fuel! And powder as solid fuel for missiles represents a new and growing field.

At the beginning of this talk, we established a convenient frame of reference—the three-fold growth that our industry recorded in the 13-years since 1946. We attribute this growth to the versatility of our metal, which I have labeled the V-factor. It is this V-factor that encourages us to believe that 13 years hence a new frame of reference will show another three-fold growth from the 2½ million tons in 1959 to 7½ million tons—and possibly more—by 1972.

Washington Report

(Continued from Page 5)

to Congress would be required.

"There is need for continuous appraisal of our resources programs for they are basic to our national existence," he said.

Stockpile Disposal Question

The question of what to do with excess materials in the nation's stockpiles continues to rear its head. Leo A. Hoegh, director of the Office of Civil and Defense Mobilization, estimated that the excess materials in the nation's stockpile might be between $2,000,000,000 and $3,000,000,000 out of a current market value of slightly over $7,000,000,000.

Testifying before the Joint Congressional Committee on Defense Production, Mr. Hoegh confirmed that legislation is being drafted to revise management procedures on all government stockpile inventories to make them "more flexible and business-like."

Mr. Hoegh conceded that there are excesses in some inventories but said "discussions of the amount have been exaggerated." He said that "all government inventories have an acquisition cost of $8,100,000,000. We estimate that the current market value is slightly over $7,000,000,000 for all materials in government inventories. The materials that might be considered excess we believe to be between $2,000,000,000 and $3,000,000,000 out of this total of $7,000,000,000."

The OCDM director emphasized that disposal of any part of this excess would be in accordance with present policy "of not causing serious economic disruption and in the case of strategic and supplemental stockpiles, would require referral to the Congress.

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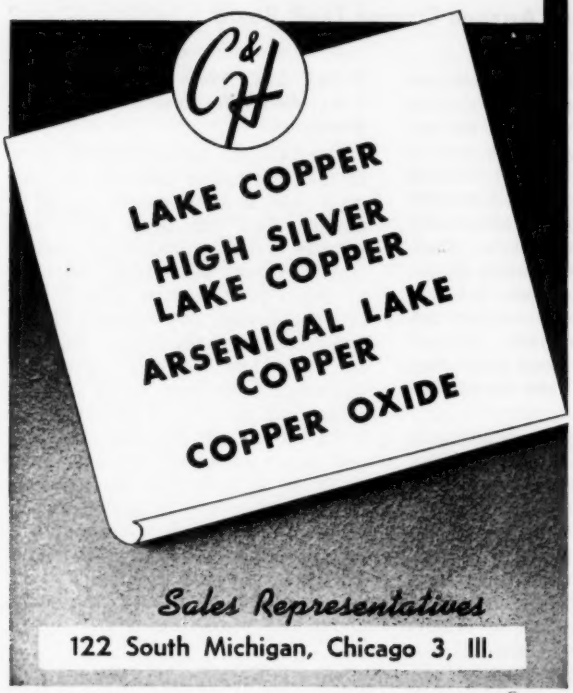

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Sizing Up the Copper Situation

By CHARLES F. WILLIS, Consultant, Arizona Copper Tariff Board

THE copper situation in the United States and the Free World is in such a confused state at present that it is rather difficult, if not impossible, to determine the future trend of the industry. So much depends on so many "iffy" factors. Such factors are: the law of supply and demand; the labor situation, both here and abroad; government long-range mineral policy as to tariffs, quotas and stockpiles; inflation; changes in production costs; and fluctuating copper prices. A brief history of the copper industry will show the effect of these various factors.

Basic to this confused situation is the fact that, because the government created so much new domestic copper productive capacity as a national security measure, the productive capacity of the world is in excess of the world's consuming capacity. Thus the copper situation is extra sensitive to economic changes, almost on a day-to-day basis.

There is no stabilizing influence at work and, right now, that is the greatest need. This condition, it is believed, will correct itself with the increasing uses of the metal and when production and consumption become more nearly in balance.

As Arizona produces about 50 per cent of the nation's number one strategic metal, the State is vitally interested in what goes on in the copper industry. Arizona's economic welfare is directly affected, for good or ill, by the world's economy. This was forcefully and unpleasantly demonstrated during 1921 and 1922 when the State's copper mines were closed down for a whole year, and again from 1932 through 1936 during the great Depression. The price of copper dropped from a war-time high of 27 cents in 1917 to 12 cents in 1921, and from an 18-cent high in prosperous 1929 to a 5.5-cent low in 1932.

After World War II, reconstruction created a demand for copper, and the demand for the metal caused a scarcity in supply, resulting in the price going above 23 cents. The 4-cent import tax, which had been imposed in 1932, was suspended from 1940 to 1947, because we were in a war period, and then for a brief period the tax again became applicable. However, the import tax was suspended by Act of Congress from April 20, 1947, through March 31, 1949. Because of a scarcity of the metal, the copper producers did not seriously object to this action. Trade agreement negotiations at Geneva in 1947 brought about a 2-cent reduction in the copper import tax effective March 16, 1949. And on March 31, 1949, Congress again suspended the tax, this time until January 30, 1950.

Soon after the tax was suspended, and during the month following suspension, domestic demand fell drastically, and for four months net domestic consumption of copper was at or below the level of domestic production, even though the latter was severely curtailed. During the same period imports continued at practically the same rate. The price of copper dropped from 23⅜ cents to 16.5 cents per pound. Many mines were forced to close down, and the large low-cost producers curtailed production. It was a perfect demonstration of the need of an adequate tariff to protect the copper industry.

Except for a brief period—July 1, 1950 to March 31, 1951—the copper tax was in suspension up to July 1, 1958. On that date, the tax was restored to 1.7 cents, that figure being the result of the GATT agreement in 1956.

Korean War Demand

The Korean War created a new demand for copper from 1950 to 1953. The government fixed a ceiling of 24.5 cents on copper in 1950. The demand for copper increased greatly outside the United States in 1950 and production and prices rose. Labor trouble beset foreign producers and they were unable to supply the United States with sufficient copper for war, defense and domestic needs. In 1951, the Office of Price Stabilization announced that the ceiling price for copper refined in the United States from imported crude materials would be 27.5 cents a pound delivered Connecticul Valley. The increased cost of foreign copper was not to be passed on to customers by the fabricators. **So, Instead Of Foreign Producers Paying An Import Tax Of 2 Or 4 Cents A Pound, They Were Given A Three-Cent Added Advantage Over Domestic Producers!**

The 24.5-cent average quoted price in 1951 was higher than in any year since 1918. It would appear logical to assume that this price would encourage domestic production, despite increased costs since 1918. Response of copper production to price stimulation is always slow because of the large capital expenditures required to bring new capacity operation. Moreover, production would not increase, but decrease, if higher prices made lower grade material economic and unless excess mill capacity were available at properties mining such lower grades ores. If the quoted price is adjusted according to variation in the Bureau of Labor Statistics wholesale price index, however, it is found to be below prices in 1947, 1940, 1939, 1937 and in most years from 1922-30 inclusive.

The United States Was Bearing The Brunt Of The Korean War, Yet, WITH NO SUBMARINE MENACE, We Failed To Receive An Adequate Supply Of Copper From Abroad. The experience proved that an active, going **domestic** mining industry is our only assurance of defense in time of war.

Establishment of DMPA

The Defense Production Act of 1950, giving the President the power to regulate the economy to assure adequate supplies of materials for expanded defense and essential civilian requirements, led to the establishment of the Defense Materials Production Administration to render government assistance to industry in expanding supplies of critical minerals. The success of the program may be noted from the fact that the average annual production of copper in the U.S.A. for the six years prior to the start of the DMPA effort was 787,700 tons, whereas the production for 1956 was 1,106,000 tons, an increase of 318,300 tons. It would seem only equitable that, inasmuch as this increased productive capacity was brought about by a government agency carrying through a law enacted by Congress and signed by the President, Congress should be responsible for taking some sort of action to stabilize the copper industry

Text of statement presented for inclusion into testimony at hearings of House Interior subcommittee on mines and mining, June 25 to July 2, 1959.

when supply and demand get out of balance.

In 1953, the Government removed controls from many raw materials, including copper. In the case of copper, the domestic price immediately jumped to its natural level of 30 cents, showing that the copper industry had been getting only 24.5 cents for metal that was really worth 30 cents. The price held fairly stable at 30 cents for the rest of 1953 and 1954, while foreign copper was enjoying a 34-cent price.

In 1955, copper began to get more and more in short supply, and the price rose from 30 cents to 43 cents. By March, 1956, the price was 46 cents, and some foreign copper was sold at as high as 55 cents. Tthe Free World was going through an amazing industrial development and, in spite of maximum production of the metal, both domestic and foreign, stocks became precariously low.

By the middle of 1956, domestic consumption began to decrease, but with the advent of new properties, production continued to increase, and the domestic price dropped from 46 cents to 36 cents by the end of the year. Meanwhile, the rest of the Free World was increasing both consumption and production, but the latter was gaining and by the end of the year stocks had increased by 73,000 tons, and foreign prices dropped from 46 cents at the beginning of the year to 34 cents at the end.

1957 Industrial Recession

The year 1957 saw an industrial recession, and the United States copper industry was the principal sufferer, with the price of copper dropping from 36 cents to 26.5 cents. Costs of production continued to rise, due largely to a three-year wage contract which had been negotiated in 1956 when copper was selling for 46 cents. Also, curtailment of production at some of the properties resulted in increased per pound costs. However, actual production in 1957 was practically the same as in 1956, because of new properties reaching capacity production during the year. Stocks therefore rose to new highs, and by February of 1958 the price had dropped to 25 cents, producer price, with some sales made at 23 and 24 cents. Prices in Europe fell below 20 cents.

The year 1958 saw curtailment measures taking effect during the first seven months, with United States production dropping from 90,000 tons monthly to 61,200 tons in July.

Meanwhile, in Washington, a measure designed to sharply reduce copper imports by doubling the import duty was introduced in both the Senate and the House. The new bill would have increased the tax from 2 cents a pound to 4 cents, and the peril point to 30 cents instead of 24 cents.

In March, Senator Murray's Subcommittee on Minerals conducted public hearings relative to a long-range minerals program. Mr. A. B. Parsons, consulting engineer, presented the copper industry's views on the need of a copper tariff to prevent disasterous shut-downs of many copper mines in the event of a long business depression.

On April 11, Interior Secretary Seaton endorsed Senator Watkins' bill to revoke the current suspension of the 2-cent import tax on copper. Then, on April 28, the Secretary submitted the Administration's subsidy plan for domestic producers of copper, lead, zinc, acid-grade fluorspar and tungsten. The plan was plainly an alternative to any new tariffs or quotas which might affect favorable action on the Reciprocal Trade Agreements Act which was pending. Top executives in leading metal and mining companies were quick to raise their voices in opposition to the minerals subsidy program.

The already confused picture concerning government relief for the domestic mining industry was further confused by the introduction of another new plan. This time it was a program for the government to purchase existing surplus copper in large lots and stockpile the metal.

The Seaton Stabilization Bill (S. 4036), amended to include the authorization to purchase 150,000 tons of copper at market prices up to 27.5 cents a pound, was passed by the Senate (July 11) by a vote of 70 to 12, and was sent to the House. The House Interior Committee added some amendments and gave it a "do pass" recommendation on July 30, but it was August 15 before the House Rules Committee cleared it for floor consideration. The bill was defeated in the House of Representatives on August 21 by a vote of 182 to 159, after a bitter debate and many additional crippling amendments.

Defeat of S. 4036 ended all hopes of assistance for the mining industry at the second session of the 85th Congress. Mining men had accepted the subsidy plan as a "temporary alternative" although expressing a definite preferences for higher tariffs.

Reinstatement of Excise Tax

Meanwhile, the suspension of the copper excise tax ended on June 30, and a 1.7-cent tax on copper imports became effective July 1. Copper prices began to rise about the middle of July, when the producers' price was raised from 25 cents to 26.0-26.5 cents. The next rise from 26.1 to 27.0 cents took place October 13, but it was actually the middle of October before signs of improvement in the copper situation became definite.

During the last half of 1957 and throughout the year 1958 there had been a sizable reduction in copper imports into the United States and a sizable increase in copper exports from the United States. The result was an annual drop of over 200,000 tons in the excess of imports over exports. This factor no doubt had an appreciably beneficial effect on the domestic copper situation. United States copper mines had been encouraged to increase their production to take care of a greater proportion of the demand than was possible before.

Copper started out the year 1958 with a very pessimistic outlook, but ended the year in a far better situation.

According to the Copper Institute, United States crude production for the first five months of 1959 has averaged 97,626 tons, which, if continued throughout the year, would result in a record annual production of 1,171,500 tons of copper as compared with 1,133,000 tons in 1956. The Free World outside the U. S. A. was reported by the Copper Institute to have averaged 166,000 tons of crude copper per month in the first five months, which, if continued throughout the year, would result in a record annual production of 1,992,000 tons of crude copper as compared with 1,781,000 tons in 1957.

Deliveries to fabricators, according to the Institute, averaged 126,000 tons of refined copper per month for the first five months of 1959, or an annual rate of 1,512,000 tons. The Free World deliveries outside of the U. S. A. were reported to have averaged 134,300 tons for the first five months, or an annual rate of 1,612,000 tons.

The Copper Institute reports that refined stocks in the U. S. A. at the end of 1958 were 80,722 tons, and at the end of May, 1959, they were 86,132 tons, an increase of 5,410 tons. Outside the U. S. A. refined stocks were reported at 181,822 tons at the end of 1958, and 264,640 tons at the end of May, 1959, an increase of 82,818 tons. This means a total increase in Free World stocks of 88,228 tons in five months. This is a sizable increase in stocks of copper, and requires serious consideration by those trying to determine future trends. This increase, in the face of

(Continued on Page 17)

COPPER STRIKE NEWS IN U.S. DOMINATES MARKET IN LONDON; EUROPEAN USE LIKELY TO GROW GRADUALLY

Tin Holds Steady With Some Increase in Export Quotas for Fourth Quarter Expected; Lead Seen Continuing in Easy Supply; Optimism Voiced on Zinc

August 10, 1959

By L. H. TARRING
London, England

A MONTH AGO there was increasing belief that a major strike in the United States Copper producing industry would, after all, be avoided. Unfortunately, this belief has proved to be erroneous as Phelps Dodge and Kennecott are both affected by strikes and there seems to be a fair chance that the other producers will be similarly stopped unless wage negotiations make considerable progress in the next few days. The fact that the steel strike in America is not yet settled is, perhaps, not a very helpful factor as it is generally felt here that the copper producers may wish to see the pattern of the eventual settlement in steel before finally coming to terms with the unions.

The question of whether or not there was to be a stoppage in American production has been the dominant market factor here in recent weeks and after an easy trend in the first ten days of July quotations have gradually picked up, with a sharp rise on news of the Kennecott strike. This was helped, of course, by the earlier news that Phelps Dodge had decided to cut production by 7 per cent and that the Rhodesian Selection Trust Group would reduce output to 90 per cent of its January/June level of output. The other big Rhodesian producer made no firm promises but indicated that its production in the second half of the year would probably be smaller than in the first half, probably owing to the fact that in the early part of this year output was at a very high rate to make up for ground lost during the strike in the latter part of 1958. Indeed Nchanga achieved a record year's production. A rather vaguely worded intimation was also given that Chile might be prepared to reduce production. However, but for the strike the impression prevails that production will remain ahead of consumption unless further definite cuts in output are instituted — so that the firmness in the market at the moment may prove to be somewhat temporary. Everything hinges upon how complete the strike becomes and its duration.

Indications Promising

The consuming industry is still emerging from the peak holiday season over here but in general the economic indications are promising. This should mean a gradual rise in European consumption which has been fairly satisfactory this year, apart from wire which has suffered very considerably (in this country and to a lesser extent in Germany) from the absence of Russian orders.

The further talks between consumers and some of the producers early in July on the question of an alternative method of pricing for period contracts failed to result in any agreement on the producers' suggestions for a managed price for primary production. Indeed, the position in this respect seems to have changed very little in recent months. There are a number of consumers in Europe who are by no means averse to the producers' suggestions but so far neither the British fabricators nor their German counterparts seem to have much enthusiasm for the idea as the producers' proposals do not provide any satisfactory alternative to the hedging facilities provided by the London Metal Exchange. British consumers, in particular, are extremely chary of getting mixed up again with a dual pricing system owing to the many problems this is likely to create in the disposal of their semi-finished products.

At the moment, one of the larger British motor car works is affected by a strike but as this coincided with the annual holiday it has so far not had any serious repercussions on the demand for brass mill products: but if it persists it may slow down demand for certain items. However, this is of much smaller significance than the American strike news at the present time. It has recently been announced that the Post Office here is to increase its capital expenditure and it is hoped that this will bring some additional

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. production of refined copper in May was 6,869 tons of primary and 6,148 tons of secondary compared with 10,053 tons and 8,140 tons respectively in April. Stocks of refined copper rose 5,418 tons to 66,498 tons (61,080 tons) and blister rose to 12,007 tons (11,238 tons). Consumers held 39,214 tons (38,259 tons) of the refined stocks. Consumers held 39,214 tons (38,259 tons) of the refined stocks. Consumption declined to 47,620 tons from the April total of 55,524 tons. Details are given below:

Unalloyed Copper Products	May 1959	5 mos. ending —31st May— 1958	1959
Wire (1)	16,410	112,773	89,779
Rods, bars & sections	1,438	8,924	8,228
Sheet, strip & plate	4,789	23,905	23,627
Tubes	5,134	25,177	26,094
Castings & miscellaneous	650	3,250	3,250
Allied Copper Products			
Wire	1,341	6,682	6,996
Rods, bars & sections	10,245	51,292	54,822
Sheet, strip & plate	8,079	38,532	41,042
Tubes	1,453	10,362	8,731
Castings & miscellaneous	5,818	31,487	30,970
Copper sulphate	3,630	11,583	17,456
Total all products	58,987	323,967	310,995
Copper content of output	47,620	271,127	252,097
Consumption of refined copper (2)	33,367	213,238	188,096
Consumption of copper & alloy scrap (3) (copper content)	14,253	57,889	64,001

Notes: (1) Consumption of H. C. copper and cadmium copper wire rods for wire and production of wide rods for export.
(2) Virgin and secondary refined copper.
(3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. TIN STATISTICS

Consumption of tin during May dropped slightly to 1,686 tons compared with 1,746 tons the previous month, according to the British Bureau of Non-Ferrous Metal Statistics. Production rose to 1,808 tons (plus 32 tons of secondary) against the April figures of 1,636 tons (31 tons) while stocks in the U. K. at May 31st showed a further decline at 9,445 tons from the April figure of 10,685 tons. Details of consumption of primary tin are given below:

	May 1959	5 mos. ending —31st May— 1958	1959
Tinplate	799	3,884	4,051
Tinning:			
Copper wire	43	223	235
Steel wire	10	39	45
Other	64	303	326
Total	117	565	606
Solder	163	686	898
Alloys:			
Whitemetal	239	1,154	1,247
Bronze & gunmetal	156	996	822
Other	34	176	167
Total	429	2,326	2,236
Wrought tin (1)			
Foil & sheets	40	121	134
Collapsible tubes	16	118	93
Pipe, wire & capsules	2	19	18
Total	58	258	245
Chemicals (2)	120	414	551
Other uses (3)		41	
Total all trades	1,686	8,174	8,587

Notes: (1) Includes Compo and "B" Metal. (2) Mainly Tin Oxide. (3) Mainly powder.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1954 Averages	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11
1955 Averages	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	90 13 4	89 12 3
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7
1957 Averages	219 8 10	221 0 3	219 12 10	754 15 4	747 10 10	755 3 11	96 12 9	96 13 2	81 11 7	80 1 1
1958 Averages	197 13 3	197 9 3	197 16 11	734 18 6	734 17 11	735 6 1	72 15 8	73 6 10	65 17 12	65 10 12
1959										
January	230 2 0	227 5 10	230 5 0	758 15 6	759 4 9	759 2 10	71 17 0	72 3 3	74 17 8	72 18 8
February	236 4 2	235 10 8	236 7 6	772 9 9	773 9 0	772 15 0	69 19 4	70 16 6	73 13 8	71 19 8
March	248 10 3	247 12 2	248 13 6	779 14 9	783 5 9	780 1 6	69 10 3	71 4 2	75 2 5	73 18 8
April	240 0 5	240 6 6	240 3 5	782 5 3	783 15 5	782 11 4	69 1 0	70 8 4	72 13 9	72 9 2
May	236 4 2	236 11 6	236 6 9	784 4 3	784 10 9	784 10 0	70 16 0	71 13 10	77 7 1	75 17 6
June	230 0 11	230 0 4	230 3 8	788 7 9	789 8 10	788 14 1	69 13 4	71 5 8	78 8 2	77 6 11
July	220 17 6	221 14 9	221 0 3	792 6 6	790 16 4	792 13 6	70 5 0	71 1 2	80 10 7	79 13 4

business to the wire and cable makers who have been experiencing rather unsatisfactory conditions this year.

Tin Holds Steady

Although the strike which broke out in the United States steel industry in the middle of July rather naturally reduced consumer demand from America to a mere trickle, the tin market has remained remarkably steady during the past month as far as prices are concerned. Indeed, with the Buffer Stock Manager only letting out just enough metal to meet demand, spot tin is in rather tight supply as far as the open market is concerned and the small contango ruling at the beginning of July has given place to a backwardation of about £2.10.0d a ton. It is generally believed here that the Buffer Stock Manager has begun to dispose of some of the 2,500 tons of British Government stocks which he is to liquidate over the remainder of this year and the Buffer Stock itself is also believed to have been brought down to between 13,000 tons and 14,000 tons. This latter figure is purely an estimate and market guesses on the subject have from time to time varied somewhat widely. As the general economic trend both in America and Europe is favorable, it is assumed that overall demand for tin will make some small progress in the coming months though, obviously until American consumption gets back to normal, the picture is likely to be somewhat distorted. Unless there is an early settlement in the United States steel strike, the International Tin Council may have a difficult problem at its next meeting (on September 1st) deciding whether to increase export quotas for the fourth quarter of the year—and if so by how much. At the moment, the general expectation here is that there will be some increase in these quotas and that this can be done without jeopardizing price stability.

Lead Attitude Cautious

On balance, lead prices on the London market have shown a useful increase during the past month but many people here are still preserving a very cautious attitude toward this metal. Towards the end of July the London market saw some fairly vigorous buying of nearby metal by producers' representatives which, for a time, resulted not only in firmer prices but in the appearance of a backwardation instead of a contango. However, this aspect proved to be short lived and there is again a moderate contango in evidence. The open market here is rather a thin one nowadays, partly owing to the fact that neither Australia nor Canada is willing to see any of its metal come on to the open market for fear that it would upset the producers arrangements with regard to American import quotas. Partly also because less Spanish lead is coming here at present. Consumers, however, report that there is no scarcity of physical metal and indeed the competition for direct producer/consumer business is remarkably keen. Consumption of lead while reasonably well maintained on the whole, still shows little indication of expanding in line with the general economic trend. For the time being most observers seem to be taking the view that an easy supply position of physical metal will continue, at any rate over the remainder of this year. One aspect that is not overlooked is that the better appearance of zinc recently raises the possibility of larger supplies of this metal being needed to meet the consumers' demands and it is wondered whether this might result in the restrictions on lead supplies also having to be relaxed.

Good Zinc Showing

Despite the quiet holiday period the zinc market has continued to make a good showing and prices have moved up to the highest level for over two years and are some £4 a ton higher over the past month. Leading producers are quite well satisfied with current price levels and, indeed, are believed to be more interested in seeing supplies to the market restored to their full level rather than to see prices pushed higher by maintaining the voluntary curtailment of supplies which has ruled since about the end of April. So far, however, no definite steps seem to have been taken in this direction but it would not be surprising to find a further meeting of producers convened before the year is out to try and formulate an agreed policy in this connection. Meanwhile the general level of zinc consumption has been improving and the setback to the industry in the United States as a result of the steel strike there has had singularly little effect.

U. K. LEAD STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, lead stocks in the U. K. at the end of May were 63,135 tons (53,056 tons imported and 10,079 tons English refined) compared with 62,286 tons (53,751 tons and 8,535 tons) in April. Production during May declined slightly to 7,473 tons compared with 7,616 tons a month earlier. Full consumption details are given below:

	May 1959	5 mos. ending —31st May— 1958	1959
Cables	7,468	44,088	39,731
Batteries — as metal	2,518	12,785	12,013
Battery oxides	1,926	11,780	10,744
Tetraethyl lead	2,417	8,155	9,304
Other oxides & compounds	1,964	10,501	10,729
White lead	634	3,557	3,232
Shot (inc. bullet rod)	283	1,913	1,661
Sheet and pipe	5,593	26,826	27,232
Foil & collapsible tubes	264	1,852	1,416
Other rolled & extruded	548	2,376	2,630
Solder	1,115	5,650	5,846
Alloys	1,468	7,548	7,993
Miscellaneous uses	1,082	5,213	5,532
Total consumption	27,280	142,244	138,063
of which:			
Imported virgin lead	14,940	71,162	71,303
English refined	5,345	32,783	29,176
Scrap including remelted	6,995	38,299	37,584

U. K. ZINC STATISTICS

During May, zinc stocks declined slightly to 37,713 tons compared with 38,643 tons at the end of April, according to the British Bureau of Non-Ferrous Metal Statistics. Of this total consumers held 16,627. Production at 5,938 tons showed a slight increase compared with the previous month's total 5,424 tons. Consumption details are given below:

	May 1959	5 mos. ending —31st May— 1958	1959
Brass	8052	41,009	43,658
Galvanizing	7,460	36,130	39,186
of which: General	2,723	13,891	13,522
Sheet	1,742	8,019	10,177
Wire	1,694	9,036	8,350
Tube	1,301	5,184	7,137
Rolled zinc	2,097	10,518	10,293
Zinc oxide	2,367	11,795	11,891
Zinc diecasting and forming alloy	4,329	20,612	20,803
Zinc dust	971	4,244	4,654
Miscellaneous uses	891	4,631	4,496
Total all trades	26,167	128,939	134,981
of which:			
Slab zinc			
High purity (99.99%)	4,434	22,707	22,189
Electrolytic & high grade (99.95%)	5,198	25,156	26,052
G.O.B. Prime Western & debased	9,533	46,947	49,703
Other virgin material	194	1,329	1,032
Remelted zinc	427	2,205	2,316
Scrap—(Zinc content)			
Zinc metal, alloys & residues	2,643	13,126	13,523
Brass and other copper Alloys	3,738	18,369	20,166

STRIKES DOMINATE NEWS IN U.S. METAL MARKETS; 75% OF NATION'S COPPER PRODUCTION THROTTLED

Substantial Segments of Lead and Zinc Industry Also Hit by Mine-Mill Walkouts; Consumers Amply Supplied for Present; Aluminum Output Is Not Interrupted

August 20, 1959

STRIKES dominated the metal market news during the month in review. At this writing the walkouts have throttled about 75 per cent of the nation's copper production, entailing an output loss of about 75,000 tons a month. Substantial segments of the lead and zinc producing industry also have been hard hit. Aluminum producers thus far have gotten off with a suspended sentence, with the extension of contracts linked to the duration of the steel strike. The trend of the various markets will depend on the length of the shutdowns.

Pricewise, it has been a rather stable month with only one change—an advance in the custom smelter price of 0.50c to 30.00c a pound—the level still quoted by producers—on August 7. Because of the strikes, only one custom smelter is currently in a position to book orders and this price must be considered nominal. Copper in the outside market, however, has sold at 33.00c and 32.25c a pound, August and September delivery being guaranteed. Lead and zinc prices were firm, the former at 12.00c New York and the latter at 11.00c for Prime Western at East St. Louis.

Thus far, the copper industry strike has not yet occasioned any great excitement among consumers. Hardly any consumers are likely to be pinched for supplies for the next few weeks because of the inventories that they have been building up during the past few months in anticipation of strikes. Some of the very large consumers who depend on Kennecott and Phelps Dodge and on Anaconda for 75 to 80 per cent of their copper are concerned over the duration of the strike since a protracted work stoppage might create a squeeze on these consumers.

The extent of the strike-hedge buying is evident from the fact that for the period January-July, the monthly deliveries of refined copper to domestic consumers averaged close to 127,000 tons a month as compared with a monthly average of about 106,000 tons during the last half of 1958. Similarly, the consumers of fabricated products bought heavily as a protection against a strike. During the first six months of the current year the volume of new business booked by fabricators averaged 126,000 tons a month and their shipments of such products averaged close to 123,000 tons a month.

LEAD PRICE BOOSTED 1c TO 13c NEW YORK BY ST. JOE
The St. Joseph Lead Company announced effective August 24 an advance of 1.00c per pound in its lead price to 13.00c New York and 12.80c St. Louis.

July Deliveries Drop

As anticipated the copper figures for July reflected the lull following the abnormal buying situation in June.

Deliveries of refined copper to domestic consumers in July dropped to 108,127 tons from 150,117 tons in June, according to figures compiled by the Copper Institute. The July deliveries were 41,990 tons less than in the preceding month when buying was inspired by fears of a strike in the copper industry. The July deliveries also were the lowest since September, 1958.

The domestic refined stocks at the end of July were up sharply, to 103,432 tons from 85,674 tons for June, an increase of 17,558 tons. Stocks at the end of July were the highest since November, 1958.

There was a smaller domestic primary output in July, the month's figure being 81,835 tons as compared with 99,419 tons in June. The production from secondary also was smaller in July, 8,138 tons as against 11,352 tons in the preceding month, so that the combined crude production for July came to 89,973 tons compared with 110,771 tons in June, a decrease of 20,798 tons.

Domestic refined production in July was 134,020 tons as against 138,403 tons in June. Refined output in July was the lowest since November, 1958.

The world output of primary copper in July was 256,974 tons as compared with 277,855 tons in June. The world deliveries to consumers (U. S. and foreign combined) came to 230,924 tons, a drop of 63,308 tons from June's 294,232 tons.

The world stocks of refined copper at the end of July were 309,554 tons, an increase of 44,125 tons from June.

St. Joe Operations Unaffected

As far as lead is concerned, the St. Joseph Lead Company is the only major producer that is not affected by strikes. The company's workers at Herculaneum belong to the Glassworkers Union and the company's contract with the union does not expire until the end of September, 1960.

Lead Statistics Favorable

The dramatic continued improvement in the lead market during June is reflected in the statistics for that month which show record domestic shipments, a sharp decrease in producers' stocks and a dip in output to a four-year low.

Domestic lead shipments in June totaled 75,465 tons, an increase of 10,258 tons over the 65,207 tons delivered during May and a new all-time peak, according to figures released in mid-August by the American Bureau of Metal Statistics. For the first half of this year the shipments amounted to 298,021 tons, an increase of 127,611 tons over the 170,410 tons delivered in the first six months of 1958.

Producers' stocks of refined lead amounted to 133,235 tons at the close of June, a drop of 38,342 tons from 171,577 tons carried at the close of May and a decrease of 81,711 tons from the 214,946 tons held at the close of February this year. Stocks at the end of June were the lowest since the end of March, 1958, when 128,574 tons were carried.

Output of primary and secondary lead totaled 37,459 tons during June, a decrease of 1,642 tons from the 39,101 tons turned out in May. Output in June was the lowest since August, 1955, when production came to 36,912 tons. Lead production in the first half of this year amounted to 239,554 tons, a decline of 31,792 tons from the 271,346 tons produced in the corresponding 1958 period.

Asarco Zinc Plants Operate

The American Smelting & Refining Company's zinc plants are not affected by the strike that closed down their lead and copper plants. The company's old electrolytic zinc plant at Corpus Christi has a contract with the Steelworkers union that does not expire until January 1, 1960 and its

retort plant at Amarillo also has a contract with the Steelworkers that expires at the end of September 1960. Aside from the big electrolytic zinc plants at Anaconda and Great Falls, belonging to The Anaconda Company, which went on strike on August 19, the plants of the major zinc producers will continue in operation since their contracts with the unions do not expire until 1960. The Bunker Hill electrolytic zinc plant at Silver King is still operating. The company and Mine, Mill agreed on an extension to August 31, the contract having expired on June 30.

The strike at zinc plants is not expected to have any affect on the market. For one thing, the steel strike has virtually halted the shipment of Prime Western to galvanizing plants. Then again, the output by other major producers is continuing without any interruptions and there are substantial stocks in the hands of producers. These factors, however, are not likely to deter the price from moving up when the steel strike is over. The strength abroad is indicative of the probable trend of the market here. The price of zinc on the London Metal Exchange is above the domestic parity.

Effect of Steel Halt

The deterioration that has taken place in the statistical position of zinc reflects the effects of the steel strike. With the struck galvanizing plants not taking any Prime Western zinc, the shipments of all grades of zinc in July dropped to the lowest level since June, 1958, the recession year. Another reason for the slump in shipments is that many consumers had anticipated a strike and so took in about 9,000 tons of zinc on consignment in June. With production maintained and shipments down, stocks of slab zinc in producers' hands at the end of July showed a gain of more than 12,000 tons.

Domestic production of all grades of zinc in July amounted to 73,101 tons as compared with 75,544 tons in June, a decrease of 2,443 tons, according to figures compiled by the American Zinc Institute The July output was the smallest for any month since last February. The decrease was in Special High Grade and in Prime Western.

The shipments of all grades of slab zinc to domestic consumers in July were down to 59,460 tons, a drop of 40,389 tons from the preceding month. As noted above the June shipments of 99,858 tons were abnormally large. The indications are that there will be a further drop in the August shipments because of the continued strike in the steel industry. Including the shipments for export and drawback and the shipments to the Government of 900 tons, the combined total in July was 60,454 tons as compared with 102,162 tons in June, a drop of 41,708 tons, or about 41 per cent.

Stocks Show Gain

Stocks of all grades of zinc in the hands of producers at the end of July amounted to 182,033 tons as compared with 169,386 tons at the end of June, a gain of 12,647 tons. This is the first increase since the end of March. The biggest gain was in Prime Western stocks which were increased by 8,303 tons. The gain in Prime Western stocks was 2,411 tons.

Aluminum Output Uninterrupted

Aluminum producers have negotiated an agreement with the various unions involved to extend the contracts which expired July 31 until 30 days after a settlement in the steel industry. If no agreement is reached by November 1 or 30 days after the steel agreement, the unions and companies can terminate present contracts on 10 days notice.

Tin Market Dull

The tin market was a quiet affair for most of the month with little buying as the steel strike restricted plating activity. Spot straits tin was quoted at 102.25c a pound in the New York market on August 19 compared with the price of 102.125c a pound for July 15, the last qotation in this space.

Sizing Up the Situation in Copper

(Continued from Page 13)

the very probable accumulation of copper metal by purchasers (preparing for a possible shut-down of the industry in case of the failure of wage negotiations), adds further to the seriousness of the situation.

Copper producers' prices for copper started the year 1959 at 29 cents per pound, was raised to 30 cents in February and to 31.5 cents in March, where it has remained up to this month (June). Export prices have been quoted at from 0.5 cents to 2.5 cents lower, indicating the advantage accruing from the 1.7-cent tariff.

Huge Stockpile Stocks

A material hazard to copper-market stability is the huge stocks of the metal in the United States stockpiles, part of which can be dumped onto the market at any price and at any time. The sensitiveness of the market was indicated by the fact that, merely upon rumor that the DPA-GSA stockpiled metal was to be offered on the open market, the price immediately dropped 2 cents a pound. A program for the orderly disposition of excess stockpiled material is a "must" for copper, and that applies with equal force for many other metals and minerals which have been stockpiled.

Many believe that the 31.5-cent price for copper is still too low, and such a copper expert as Arthur Notman believes the price should average between 35 cents and 37 cents. Others fix 35 cents as a reasonable price. Reecntly, the president of Anaconda Company suggested that with copper at 35 cents, it would be a good idea to dispose of part of the surplus copper stocks, and thus stabilize the copper market at that figure. It looks to many in the copper industry that the only way to get the price up to 35 cents would be to increase the tariff from 1.7 to 4 cents per pound. Even then, the 4-cent ad valorem tax on 35-cent copper would be less than 11.5 per cent as compared with an ad valorem tax of 40 per cent, during the first 8 years when the 4-cent copper tax was in effect.

A study of three Arizona copper companies' annual reports showed a 40 per cent increase in production costs from 1951 to 1958. This means that if 24 cents was a fair peril point in 1951, then 33.6 cents would be justified under present conditions.

If the miners get the wage and fringe-benefit increases they are demanding, production costs are bound to rise accordingly, and a still higher market price will be needed. Without any wage increase, the price for copper is now 3.5 cents lower than copper producers believe to be reasonable and fair.

Increased Duty Needed

While domestic copper producers have been increasing their productive capacity to meet anticipated increases in copper consumption, foreign producers are increasing their capacity at an even faster rate. Hence it would seem desirable that domestic producers should not have to compete again with excess imports. The experience of the lead-zinc producers indicates that import quotas are a poor remedy. By far, the most equitable solution is an increased copper tariff. This history shows that the domestic copper industry has experienced trouble every time the tariff was suspended, and that prices have risen when the suspension was ended. The apparent reason that the price increases have not been great enough is that the amount of the tariff was not sufficient.

Daily Metal Quotations for July, 1959

The following quotations are taken from the Daily Metal Reporter*

(In Cents Per Pound)

JULY	Copper					Tin		Lead		Zinc					Aluminum	Antimony	Silver
						Straits New York											
	Producers' Price Del. Conn.	Custom Smelters' or Outside Price	Electro f. o. b. Refinery	Lake Del.	Aver. Prompt Electrolytic Export Price f.a.s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	30-Lb. Ingot 99½% Plus (f. o. b.)	Domestic Sort 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
1	31.50	30.00	30.35	31.50	28.00	103.00	103.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
2	31.50	30.00	30.35	31.50	28.00	102.875	102.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
3	31.50	30.00	30.35	31.50	28.00	102.875	102.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
6	31.50	30.00	30.35	31.50	28.00	103.00	103.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
7	31.50	29.50	30.10	31.50	27.50	102.875	102.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
8	31.50	29.50	30.10	31.50	27.50	102.75	102.75	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
9	31.50	29.50	30.10	31.50	27.375	102.875	102.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
10	31.50	29.50	30.10	31.50	27.00	102.75	102.75	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
13	31.50	29.00	29.85	31.50	26.00	102.50	102.50	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
14	30.00	29.00	29.10	30.00	26.75	102.25	102.25	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
15	30.00	29.00	29.10	30.00	27.00	102.125	102.125	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
16	30.00	29.50	29.35	30.00	27.50	102.00	102.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
17	30.00	29.50	29.35	30.00	28.00	102.125	102.125	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
20	30.00	29.50	29.35	30.00	28.00	102.00	102.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
21	30.00	29.50	29.35	30.00	28.00	102.00	102.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
22	30.00	29.50	29.35	30.00	28.25	102.25	102.25	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
23	30.00	29.50	29.35	30.00	28.00	102.00	102.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
24	30.00	29.50	29.35	30.00	28.00	102.00	102.00	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
27	30.00	29.50	29.35	30.00	28.00	101.875	101.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
28	30.00	29.50	29.35	30.00	28.00	101.875	101.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
29	30.00	29.50	29.35	30.00	28.00	101.75	101.75	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
30	30.00	29.50	29.35	30.00	28.00	101.625	101.625	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
31	30.00	29.50	29.35	30.00	28.00	101.875	101.875	12.00	11.80	11.00	11.50	11.25	12.00	12.25	26.80	29.00	91.375
AV.	**30.587**	**29.52**	**29.65**	**30.587**	**27.69**	**102.337**	**102.337**	**12.00**	**11.80**	**11.00**	**11.50**	**11.25**	**12.00**	**12.25**	**26.80**	**29.00**	**91.375**
HI.	**31.50**	**30.00**	**31.10**	**31.50**	**28.25**	**103.00**	**103.00**	**12.00**	**11.80**	**11.00**	**11.50**	**11.25**	**12.00**	**12.25**	**26.80**	**29.00**	**91.375**
LO.	**30.00**	**29.00**	**28.60**	**30.00**	**26.00**	**101.625**	**101.625**	**12.00**	**11.80**	**11.00**	**11.50**	**11.25**	**12.00**	**12.25**	**26.80**	**29.00**	**91.375**

* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1957								
Total	2,897,719	123,270	3,035,588	2,853,307	458,340	—14,599	+103,920	+89,321
1958								
July	216,315	9,516	229,578	220,801	475,164	— 3,747	— 1,659	— 5,406
August	224,673	9,474	217,914	247,116	436,476	+16,233	—38,688	—22,455
September	202,719	7,960	204,006	254,667	374,180	+ 6,673	—60,948	—54,275
October	204,938	20,613	192,199	292,630	269,654	+33,352	+105,126	—71,774
November	227,916	17,755	230,109	261,097	236,774	+15,562	—32,880	—17,318
December	253,512	8,883	282,191	260,841	258,874	—19,796	+22,100	+ 2,304
Total	2,707,926	138,696	2,805,622	2,916,588	258,874	+41,000	—199,466	—158,466
1959								
January	257,682	12,377	270,995	248,574	284,545	— 936	+22,001	+21,065
February	244,405	12,737	264,018	243,741	304,303	— 6,876	+19,578	+12,882
March	270,248	17,019	285,425	270,768	319,241	+ 1,842	+14,938	+16,780
April	265,937	15,653	278,959	270,262	329,871	+ 2,631	+10,630	+13,261
May	279,629	11,695	283,024	266,378	350,343	+ 8,300	+20,472	+28,772
June	277,855	12,347	284,420	294,232	345,429	+ 5,782	— 4,914	— 868
July	256,974	9,013	274,588	230,924	389,554	— 8,551	+44,125	+33,574

In U. S. A.

1957								
Total	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
June	71,092	10,980	107,918	100,796	244,450	.....	— 8,013	.....
July	64,444	8,858	110,130	77,523	242,781	.....	— 2,669	.....
August	67,917	8,999	100,640	86,982	215,560	.....	—27,221	.....
September	79,541	7,259	107,971	101,971	178,222	.....	—37,338	.....
October	92,214	19,865	113,288	120,793	128,490	.....	—49,732	.....
November	96,369	16,755	128,048	131,188	93,596	.....	—34,894	.....
December	97,641	7,911	146,978	116,310	80,722	.....	—100,302	.....
Total	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	—12,874	.....
1959								
January	95,542	11,284	137,361	114,425	80,780	.....	+ 58	.....
February	88,432	11,425	142,235	120,134	85,523	.....	+ 4,743	.....
March	101,410	16,120	140,928	124,220	85,952	.....	— 2,751	.....
April	98,376	14,287	137,490	135,233	74,323	.....	— 8,629	.....
May	104,236	9,933	135,031	135,135	86,132	.....	+11,809	.....
June	99,419	11,352	138,403	150,117	85,674	.....	— 458	.....
July	81,835	8,138	134,020	108,127	103,432	.....	+17,558	.....

Outside U. S. A.*

1957								
Total	1,783,119	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
June	143,191	584	120,469	140,029	231,373	.....	—13,680	.....
July	151,871	658	119,448	143,278	232,383	.....	+ 1,010	.....
August	156,756	475	117,274	160,134	220,916	.....	—11,467	.....
September	123,178	701	96,035	153,633	196,558	.....	—23,610	.....
October	112,724	748	78,911	171,827	141,164	.....	—55,394	.....
November	131,334	980	102,061	129,909	143,178	.....	+ 2,014	.....
December	155,871	972	135,213	144,531	178,152	.....	+34,974	.....
Total	1,699,756	7,402	1,359,082	1,737,172	178,152	.....	—99,164	.....
1959								
January	162,140	1,093	133,634	134,149	203,765	.....	+21,943	.....
February	155,973	1,312	121,783	123,607	218,780	.....	+15,015	.....
March	168,838	899	144,497	146,548	236,232	.....	+17,502	.....
April	161,561	1,366	141,469	135,029	255,548	.....	+19,259	.....
May	175,393	1,762	147,993	131,243	264,211	.....	+ 8,663	.....
June	178,436	995	146,017	144,115	259,755	.....	— 4,456	.....
July	175,139	857	140,518	122,797	286,122	.....	+26,367	.....

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	44.03	33.318	25.00	29.972
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	31.50
June	46.00	30.955	25.36	31.50
July	41.56	29.25	26.125	30.587
Aug.	40.00	28.639	26.50	....
Sept.	40.00	27.031	26.50	....
Oct.	39.308	27.00	27.548	....
Nov.	36.00	27.00	29.00	....
Dec.	36.00	27.00	29.00	....
Aver.	41.992	30.183	26.31	....

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	50.22	34.87	24.577	29.429
Feb.	52.07	32.273	23.557	30.361
Mar.	53.11	30.952	23.326	33.21
Apr.	48.88	31.24	23.66	32.84
May	44.221	30.163	23.865	32.00
June	40.00	29.60	25.52	31.477
July	38.14	28.39	29.231	29.52
Aug.	39.32	27.862	26.52	....
Sept.	39.00	25.948	26.355	....
Oct.	37.192	25.722	28.577	....
Nov.	35.95	25.435	29.829	....
Dec.	35.45	25.26	28.846	....
Aver.	42.797	28.93	25.905	....

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	43.783	33.182	25.00	30.00
Mar.	46.00	32.00	25.00	31.14
Apr.	46.00	32.00	25.00	31.50
May	46.00	32.00	25.00	31.50
June	46.00	30.955	25.00	31.50
July	41.68	29.25	25.75	30.587
Aug.	40.00	28.611	26.50	....
Sept.	40.00	27.00	26.50	....
Oct.	39.321	27.00	27.577	....
Nov.	36.00	27.00	29.00	....
Dec.	36.00	27.00	29.00	....
Aver.	41.975	30.162	26.251	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	— 74,678
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
Dec.	437,187	117,601	336,217	183,834	99,223	+ 34,737
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Jan.	435,635	107,231	335,944	178,326	119,517	+ 28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+ 18,985
Mar.	429,410	104,551	338,454	164,623	106,170	+ 30,884
Apr.	429,708	98,638	335,921	164,410	117,041	+ 28,015
May	434,852	92,943	336,697	170,476	115,355	+ 20,622
June	426,905	82,919	340,743	153,042	110,527	+ 16,039
July	432,918	85,728	341,684	144,410	77,991	+ 32,552
Aug.	429,627	82,768	344,315	144,375	110,323	+ 23,826
Sept.	425,168	80,436	344,530	144,538	106,927	+ 16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+ 20,615
Nov.	428,520	68,249	345,832	128,719	98,725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	....	....	....	....	1,165,364	....
1959						
Jan.	457,387	101,182	337,761	172,698	108,556	+ 44,070
Feb.	459,046	123,321	390,522	183,113	116,565	+ 58,732
Mar.	449,441	130,785	334,904	211,547	133,259	+ 33,775
Apr.	463,582	125,250	337,282	204,618	120,680	+ 46,932
May	474,657	133,694	338,835	210,424	124,060	+ 59,092
June	492,072	111,229	343,585	191,875	133,702	+ 67,841
July	518,699	110,367	357,474	193,338	81,500	+ 68,254

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511
Feb.	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	14,712
Mar.	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	19,522
Apr.	12,304	8,553	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525
May	8,749	8,458	8,033	10,857	8,687	15,133	20,805	12,397	13,989	13,960
June	20,523	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	15,065
July	10,040	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	11,201
Aug.	10,462	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	....
Sept.	4,903	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	....
Oct.	9,459	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	....
Nov.	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	....
Dec.	7,178	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	....
Total	142,067	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	19,456	18,874	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	22,046
Feb.	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746
Mar.	14,550	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948	18,825	26,109
Apr.	10,695	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	26,115
May	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437	22,037	17,191	23,967
June	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	22,922
July	10,220	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	20,346
Aug.	14,194	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	....
Sept.	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	....
Oct.	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	....
Nov.	18,488	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	....
Dec.	17,950	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	....
Total	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	....
Aver.	14,637	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,681	18,133	....

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1956				
Ttl.	79,681	2,130	1,018,496	1,100,307
1957				
Dec.	6,962	67	81,080	88,109
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Jan.	7,615	164	82,476	90,255
Feb.	6,826	125	74,766	81,717
Mar.	7,517	123	79,594	87,234
April	7,035	161	76,911	84,107
May	6,522	152	71,717	78,391
June	5,801	155	62,296	68,252
July	4,188	132	56,672	61,222
Aug.	5,570	127	61,342	67,039
Sept.	5,312	114	77,561	82,987
Oct.	7,002	60	85,075	91,518
Nov.	6,617	60	87,379	94,056
Dec.	6,614	70	88,070	94,514
Ttl.	76,849	1,250	902,021	980,304
1959				
Jan.	6,590	126	90,386	97,102
Feb.	5,883	130	81,889	87,902
Mar.	6,513	140	91,499	98,152
Apr.	7,240	150	93,295	100,685
May	7,007	110	94,277	101,394
June	7,245	124	87,022	94,391

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1958				
Apr.	19.60	18.10	15.85	17.56
May	20.02	18.52	16.27	17.894
June	21.93	20.43	18.18	19.76
July	22.52	21.02	18.77	20.26
Aug.	22.62	21.12	18.87	20.12
Sept.	22.37	20.87	18.62	19.87
Oct.	24.80	23.30	21.05	22.30
Nov.	25.597	24.097	21.847	23.097
Dec.	24.356	22.856	20.606	21.856
Aver	21.788	20.282	18.035	18.047
1959				
Jan.	25.29	23.79	21.54	22.79
Feb.	26.42	24.92	22.67	24.11
Mar.	28.79	27.29	25.04	26.79
Apr.	28.04	26.50	24.29	26.04
May	27.81	26.31	24.06	25.81
June	26.80	25.30	23.05	24.80
July	25.14	23.64	21.39	23.14

*Of dry content for material having a dry copper content in excess of 69%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1958				
May	19.923	18.423	18.038	12.769
June	21.93	20.43	19.02	13.43
July	22.52	21.02	19.24	13.53
Aug.	22.62	21.12	19.11	13.80
Sept.	22.37	20.87	18.88	12.90
Oct.	24.80	23.30	20.51	14.938
Nov.	25.597	24.097	20.182	14.125
Dec.	24.356	22.856	19.038	13.038
Aver.	21.777	20.277	18.653	13.024
1959				
Jan.	25.29	23.79	19.70	13.982
Feb.	26.42	24.92	21.08	15.08
Mar.	28.79	27.29	22.85	16.85
Apr.	28.04	26.54	21.69	15.70
May	27.81	26.31	21.17	15.17
June	26.80	25.30	21.159	15.307
July	25.14	23.64	20.13	14.47

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
1958	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total
Sept. ..	116,283	8,806	125,089	121,929	7,986	129,915	279,172	18,080	297,252
Oct. ..	121,934	10,656	132,590	139,698	9,408	149,106	262,510	19,328	281,838
Nov. ..	120,951	8,971	129,922	112,495	9,381	121,876	273,033	18,918	291,951
Dec. ..	129,461	10,898	140,359	90,498	8,583	99,081	313,232	21,233	334,465
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Jan. ..	129,604	9,755	139,359	114,038	10,014	124,052	328,719	20,974	349,693
Feb. ..	114,528	8,944	123,472	90,915	9,094	100,009	347,455	20,824	368,279
Mar. ..	123,549	8,747	132,296	118,050	9,403	127,453	362,493	20,168	382,661
Apr. ..	127,995	10,398	138,393	146,409	10,345	156,754	334,178	20,221	354,399
May ..	130,046	10,216	140,262	144,988	8,566	153,554	310,042	21,871	331,913
June ..	130,142	10,960	141,102	145,966	12,894	158,860	286,028	19,938	305,966
				U. S. A.					
1958									
Sept. ..	38,508	4,525	43,033	65,301	4,516	69,817	215,389	11,991	227,380
Oct. ..	40,225	5,153	45,378	70,580	4,455	75,035	207,335	12,728	220,063
Nov. ..	36,572	3,621	40,193	44,834	4,181	49,015	217,728	12,352	230,080
Dec ..	39,504	4,307	43,811	31,869	3,737	35,606	239,049	13,417	252,466
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Jan. ..	40,110	3,365	43,475	48,311	4,492	52,803	244,870	12,426	257,296
Feb. ..	35,084	4,145	39,229	40,881	4,073	44,954	254,229	12,961	267,190
Mar. ..	35,140	3,868	39,008	49,742	4,279	54,021	248,166	12,744	260,910
Apr. ..	35,072	5,167	40,239	60,312	5,072	65,384	234,187	13,578	247,765
May ..	34,483	4,359	38,842	78,398	4,598	82,996	209,558	13,950	223,508
June ..	31,786	5,296	37,082	75,568	7,122	82,690	177,598	12,424	190,022
				Outside U. S. A.					
1958									
Sept. ..	77,775	4,281	82,056	56,628	3,470	60,098	63,783	6,089	69,872
Oct. ..	81,709	5,503	87,212	69,118	4,953	74,071	55,175	6,600	61,775
Nov. ..	84,379	5,350	89,729	67,661	5,200	72,861	55,305	6,566	61,871
Dec. ..	89,957	6,591	96,548	58,629	4,846	63,475	74,183	7,816	81,999
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	710,666	.....	.....	.....
1959									
Jan ..	89,494	6,390	95,884	65,727	5,522	71,249	83,849	8,548	92,397
Feb. ..	79,444	4,799	84,243	50,034	5,021	55,055	93,226	7,863	101,089
Mar. ..	88,409	4,879	93,288	68,308	5,124	73,432	114,327	7,424	121,751
Apr. ..	92,923	5,231	98,154	86,097	5,273	91,370	99,991	6,643	106,634
May ..	95,563	5,857	101,420	66,590	3,968	70,558	100,484	7,921	108,405
June ..	98,356	5,664	104,020	70,398	5,772	76,170	108,430	7,514	115,944

Summary of Lead Statistics for United States

Recoverable Lead Content In Tons of 2000 Pounds	Stocks (end of period) — Raw Material at Smelter	Base Bullion — At Smelter & Transit	Base Bullion — At Refinery and Process	Refined Pig and Antimonial	Total	Smelter Receipts — Primary Origin — U.S.A.	Primary Origin — Outside U.S.A.	Scrap	Total
1958									
July	81,103	4,848	30,065	211,976	327,992	23,440	19,665	1,629	44,734
August ...	75,116	4,794	33,863	212,909	326,682	23,898	13,145	1,269	38,312
September .	70,290	4,948	32,606	227,380	335,224	21,775	14,937	1,673	38,385
October	58,863	4,773	29,833	220,063	313,532	19,630	9,205	3,699	32,534
November ;.	60,222	3,573	30,208	230,080	324,083	23,603	15,932	3,869	43,404
December ..	68,197	4,489	28,955	252,466	354,107	25,544	18,921	4,090	43,555
Total	....	....	....	.....	.....	297,687	191,415	29,080	518,182
1959									
January ...	69,015	4,243	31,577	257,296	362,131	24,931	19,185	3,167	47,283
February ..	58,921	2,919	35,062	267,190	364,092	22,934	8,435	1,772	33,141
March	65,478	4,283	33,815	260,910	364,486	22,258	21,368	1,426	45,052
April	61,779	4,424	31,596	247,765	345,564	22,868	11,344	1,214	35,426
May	52,115	3,370	32,693	223,508	311,686	22,072	5,330	2,008	29,410
June	55,472	7,454	27,020	190,022	279,968	24,610	12,690	2,444	39,744

1958	Smelter Production	Refined Productions — Pig	Refined Productions — Antimonial	Refined Productions — Total	Deliveries to U. S. Fabricators reporting to ABMS — Pig	Deliveries to U. S. Fabricators reporting to ABMS — Antimonial	Deliveries to U. S. Fabricators reporting to ABMS — Total
July	40,328	36,052	2,681	38,733	47,381	5,263	52,644
August	41,099	34,275	4,890	39,165	50,145	4,956	55,101
September	42,473	38,508	4,525	43,033	65,301	4,516	69,817
October	41,975	40,225	5,153	45,378	70,580	4,455	75,035
November	41,365	36,572	3,621	40,193	44,834	4,181	49,015
December	39,972	39,504	4,307	43,811	31,869	3,737	35,606
Total	512,323	473,208	46,985	520,193	589,528	49,893	639,421
1959							
January	45,938	40,110	3,365	43,475	48,311	4,492	52,803
February	40,655	35,084	4,145	39,229	40,881	4,073	44,954
March	38,138	35,140	3,868	39,008	49,742	4,279	54,021
April	38,614	35,072	5,167	40,239	60,312	5,072	65,384
May	38,722	34,483	4,359	38,842	78,398	4,598	82,996
June	35,807	31,786	5,296	37,082	75,568	7,122	82,690

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
Total	....	613,293	644,382	....	529,484
1957					
October	54,682	52,041	106,723	59,041	40,447
November	59,041	48,771	107,812	70,874	32,193
December	70,874	50,500	121,374	91,598	24,108
Total	....	604,353	645,534	....	463,060
1958					
January	91,598	47,665	139,263	101,206	33,422
February	101,206	47,133	148,339	119,522	23,832
March	119,522	43,441	162,963	128,754	28,885
April	128,754	40,984	169,738	143,136	22,172
May	143,136	47,487	190,623	155,121	30,021
June	155,121	44,636	199,757	163,504	32,078
July	163,504	38,827	202,331	164,860	31,948
August	164,860	39,520	204,380	169,302	34,254
September	169,302	43,269	212,571	170,666	41,657
October	170,666	45,467	216,133	169,435	46,647
November	169,435	40,485	209,920	179,321	30,591
December	179,321	44,042	223,363	198,538	24,852
Total	....	522,956	614,554	....	330,359
1959					
January	198,508	43,652	242,160	208,874	33,035
February	208,874	39,498	248,372	214,946	30,685
March	214,946	39,238	254,184	210,524	40,980
April	210,524	40,606	251,130	197,823	52,469
May	197,823	39,101	236,924	171,577	65,207
June	171,577	37,459	209,036	133,235	75,465

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1955								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Dec.	6,440	1,449	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	...	6,479	686	4,614	1,064	18,674
April	6,731	2,250	....	6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,260
Aug.	5,406	2,250	220	6,165	650	6,246	1,403	27,066
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367
Nov.	2,950	2,500	85	3,126	493	3,800	706	18,533
Dec.	2,499	1,350	36	2,820	270	2,607	529	13,997
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
Jan.	2,938	550	70	4,775	521	5,173	801	18,594
Feb.	2,899	1,750	70	5,124	90	1,643	888	11,368
Mar.	3,133	1,200	35	4,711	681	3,149	908	15,068
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959								
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355
May	4,054	2,900	35	6,870	475	7,990	2,843	40,040
June	5,272	3,210	70	12,515	181	8,009	3,663	42,546

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents per pound)

	1956	1957	1958	1959
Jan.	16.16	16.00	13.00	12.619
Feb.	16.00	16.00	13.00	11.583
Mar.	16.00	16.00	13.00	11.42
Apr.	16.00	16.00	12.00	11.20
May	16.00	15.385	11.712	11.905
June	16.00	14.32	11.24	12.00
July	16.00	14.00	11.00	12.00
Aug.	16.00	14.00	10.85	....
Sept.	16.00	14.00	10.89	....
Oct.	16.00	13.704	12.673	....
Nov.	16.00	13.50	13.00	....
Dec.	16.00	13.00	13.00	....
Aver.	16.013	14.66	12.114	....

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices)
(Cents per pound)

	1956	1957	1958	1959
Jan.	21.66	21.50	18.50	18.119
Feb.	21.50	21.50	18.50	17.083
Mar.	21.50	21.50	18.50	16.92
Apr.	21.50	21.50	17.50	16.70
May	21.50	20.885	17.212	17.405
June	21.50	19.82	16.74	17.50
July	21.50	19.82	16.50	17.50
Aug.	21.50	19.50	16.35	....
Sept.	21.50	19.50	16.39	....
Oct.	21.50	19.204	18.173	....
Nov.	21.50	19.00	18.50	....
Dec.	21.50	18.50	18.50	....

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1956	1957	1958	1959
Jan.	2,058	2,638	2,004	2,672
Feb.	1,340	1,961	1,803	1,791
Mar.	1,348	1,254	1,577	1,376
Apr.	1,368	1,178	1,242	1,439
May	1,761	1,605	1,454	1,593
June	1,807	1,878	1,773	2,116
July	2,178	2,469	2,101	....
Aug.	2,571	2,856	2,333	....
Sept.	2,711	2,688	2,704	....
Oct.	3,015	3,042	2,976	....
Nov.	2,592	2,359	2,262	....
Dec.	2,265	2,015	3,036	....
Total	25,014	25,943	25,265	....

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelteries	—In base bullion (lead content)— At smelteries & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1957							
May 1..	81,061	17,035	2,705	20,890	48,053	9,391	179,135
June 1..	81,364	11,585	3,071	21,002	48,286	9,799	175,107
July 1..	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1..	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1.	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1..	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1..	76,230	14,220	2,538	18,695	47,460	11,581	170,724
Dec. 1..	65,341	11,646	3,547	21,867	59,755	11,119	173,275
1958							
Jan. 1..	79,362	11,019	2,779	23,154	79,741	11,857	207,912
Feb. 1..	79,738	11,510	3,678	24,535	88,517	12,689	220,667
Mar. 1..	79,588	9,546	3,670	22,834	107,213	12,309	235,250
Apr. 1..	83,185	10,692	2,187	21,766	116,610	12,144	246,584
May 1..	86,053	11,838	2,138	20,524	130,668	12,468	263,689
June 1..	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1.	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865
June 1..	55,223	12,239	766	20,391	157,981	13,596	260,196
July 1..	58,451	13,270	943	19,468	120,914	12,321	225,367

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	——Receipts of lead in ore—— United States	Foreign	Total	Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956					
Total	368,499	192,318	560,817	55,925	616,792
1957					
April	31,343	13,042	44,385	2,848	47,233
May	32,138	12,324	44,462	3,431	47,893
June	29,896	19,592	49,488	2,272	51,760
July	29,585	17,936	47,521	2,893	50,414
August	29,225	18,774	47,999	3,190	51,189
September	26,479	13,757	40,236	4,375	44,611
October	29,342	13,782	43,124	4,386	47,510
November	25,809	17,251	43,060	3,258	46,318
December	27,105	26,610	53,715	3,791	57,506
Total	356,409	206,901	563,310	42,537	605,847
1958					
January	25,537	22,097	47,634	3,507	51,141
February	23,789	16,400	40,189	2,184	42,373
March	21,735	20,038	41,773	3,154	44,927
April	25,104	15,821	40,925	1,913	42,838
May	27,427	10,228	37,655	1,867	39,522
June	28,577	13,811	42,388	1,366	43,754
July	22,289	19,692	41,891	1,615	43,596
August	22,984	13,043	36,027	1,252	37,279
September	20,654	14,576	35,230	1,765	36,995
October	18,678	9,093	27,771	3,577	31,348
November	24,024	14,541	38,565	3,933	42,498
December	24,366	18,804	43,170	3,982	47,152
Total	285,164	188,144	473,308	30,115	503,423
1959					
January	24,304	19,449	43,753	3,138	46,891
February	22,253	8,660	30,913	1,747	32,660
March	21,897	21,012	42,909	1,328	44,237
April	22,339	10,998	33 337	1,196	34 533
May	21,645	5,202	26,847	1,930	28,777

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1951		Apr. 1	13.75
Oct. 2	**19.00	Apr. 12	14.00
1952		June 2	14.25
Apr. 29	18.00	June 15	14.00
May 2	17.00	Aug. 25	14.25
May 12	15.00	Sept. 7	14.50
June 23	15.50	Sept. 15	14.75
June 24	16.00	Oct. 4	14.875
Oct. 7	15.00	Oct 5	15.00
Oct. 14	14.00	1955	
Oct. 22	13.50	Sept. 23	15.00-
Nov. 3	14.00		15.50
Nov. 10	14.20	Sept. 26	15.50
Nov. 11	14.50	Dec. 29	16.00
Nov. 20	14.25	1956	
Nov. 24	14.00	Jan. 4	16.50
Dec. 22	14.25	Jan. 13	16.00
Dec. 29	14.50	1957	
Dec. 31	14.75	May 9	15.50
1953		May 16	15.00
Jan. 7	14.50	June 11	14.00
Jan. 12	14.00	Oct. 14	13.50
Feb. 2	13.50	Dec. 2	13.00
Mar. 4	13.90	1958	
Mar. 10	13.50	Apr. 1	12.00
Apr. 7	13.00	May 14	11.50
Apr. 16	12.50	une 3	11.00
Apr. 21	12.00	June 18	11.50
Apr. 29	12.50	July 1	11.00
May 18	12.75	Aug. 13	10.75
May 19	13.00	Sept. 17	11.00
May 26	13.15	Sept. 30	11.50
June 11	13.50	Oct. 2	12.00
July 20	13.75	Oct. 8	12.50
July 23	14.00	Oct. 14	13.00
Sept. 16	13.50	1959	
1954		Jan. 21	12.00
Jan. 18	13.00	Feb. 11	11.50
Feb. 18	12.50	Feb. 24	11.00
Mar. 9	12.[illegible]	Mar. 5	11.50
Mar. 10	13.00	April 1	11.00
Mar. 26	13.25	April 20	11.50
Mar. 29	13.50	May 7	12.00
		Aug. 24	13.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1956	1957	1958	1959
Jan. ..	8,389	10,487	12,689	11,789
Feb. ..	9,095	10,220	12,309	12,111
Mar. ..	10,289	9,794	12,144	12,065
Apr. ..	10,690	9,391	12,468	13,355
May ..	10,902	9,799	13,154	13,596
June .	9,452	9,503	12,856	12,321
July ..	10,924	8,661	10,482	....
Aug. ..	10,074	9,553	10,889	....
Sept. .	11,181	10,215	11,004	....
Oct. ..	11,382	11,581	12,050	....
Nov. ..	11,832	11,119	11,828	....
Dec. ..	11,746	11,857	12,595	....

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

(In tons of 2,000 pounds)

End of	1956	1957	1958	1959
Jan. ..	5,045	5,113	3,743	3,541
Feb. ..	5,888	5,468	3,657	4,415
Mar. ..	5,526	5,091	3,527	4,098
Apr. ..	5,818	6,183	3,655	5 533
May ..	5,405	6,978	4,827	4,618
June ..	4,456	4,486	3 932	5,671
July ..	3,853	5,372	2,775	....
Aug. ..	5,343	7,967	5,244	....
Sept. .	6,709	7,574	4,761	....
Oct. ..	5,378	6,148	5,849	....
Nov. ..	6,993	3,791	3,913	....
Dec. ..	5,766	3,290	4,539	....
Total	66,180	67,541	50,482	....

Lead Import and Exports By Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	1959		
IMPORTS	Mar.	Apr.	May
U. S.* (s.t.)	34,850	24,258	36,205
Canada (s.t.)	1	...	...
Belgium	891	..	...
Denmark	2,264	3,201	2,663
France	3,872	3,818	3,920
Germany, (W.)**	4,504	...	...
Italy††	1,552	...	...
Netherlands	3,078	2,321	2,333
Norway	709	...	...
Sweden	1,175	795	..
Switzerland	1,738	1,143	1,660
U. K. (l.t.)	22,251	23,538	14,364
India† (l.t.)	1,547	1,118	...
EXPORTS			
U. S.* (s.t.)	433	79	74
Canada (s.t.)	11,831	7,836	...
Belgium	4,681	...	...
Denmark	775	1,265	...
France	2,631	1,032	444
Germany, (W.)**	2,104	...	...
Netherlands	568	481	392
Sweden	1,649	1,093	..
Switzerland	...	...	27
Northern Rhodesia† (l.t.)	2,032	718	714
Australia† (l.t.)	8,287	13,379	15,882

* Refined.
** Includes scrap.
†† Includes lead alloys.
† British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1959		
	Apr.	May	June
Ore (gross weight)	15,685	11,169	9,399
Algeria	855	666	1,612
Morocco	13,780	10,503	6,787
Fr. Eq. Africa	1,050	...	1,000
Pig lead	3,818	3,920	3,839
Belgium	1,093	269	1,082
Germany (W.)	505	28	48
Netherlands	...	...	20
Algeria	72	...	4
Morocco	804	1,576	1,597
Tunisia	1,066	2,047	1,088
Australia	278	...	...
Antimonial lead	2	279	38

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1959		
	Mar.	Apr.	May
(Gross Weight)			
Lead and lead alloys	22,251	23,538	14,364
Australia	16,259	15,099	8,965
Canada	4,586	4,621	3,765
Belgium	100	...	...
Peru	100	...	...
Other countries	1,206	3,818	1,634

IT PAYS
to
ADVERTISE
in the
DAILY METAL REPORTER

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

	1959		
Metal Products	Jan-May totals	Apr.	May
Ammunition	19,053	4,224	3,841
Bearing metals	9,543	2,059	2,035
Brass and bronze	10,455	2,386	2,102
Cable covering	27,704	6,248	5,432
Calking lead	31,514	6,312	9,092
Casting metals	3,342	732	470
Collapsible tubes	3,651	976	915
Foil	1,518	329	297
Pipes, traps and bends	9,443	2,059	2,108
Sheet lead	11,923	2,577	2,585
Solder	26,946	5,756	5,107
Storage battery grids, posts, etc.	70,483	12,983	15,709
Storage battery oxides	70,972	13,353	14,076
Terne metal	836	233	113
Type metal	11,309	2,367	2,159
Total	**308,691**	**62,594**	**66,041**
Pigments:			
White lead	5,316	1,725	1,442
Red lead and litharge	33,256	7,296	7,006
Pigment colors	5,593	1,349	1,363
Other*	1,808	375	277
Total	**45,973**	**10,745**	**10,088**
Chemicals:			
Tetraethyl lead	66,566	12,853	15,106
Misc. chemicals	1,329	265	281
Total	**67,895**	**13,118**	**15,387**
Miscellaneous uses:			
Annealing	2,285	476	457
Galvanizing	527	99	161
Lead plating	95	16	32
Weights and ballast	2,853	689	608
Total	**5,760**	**1,280**	**1,258**
Other uses			
Unclassified	6,801	1,534	1,392
Total reported†	**435,120**	**89,271**	**94,166**
Estimated unreported consumption	10,000	2,000	2,000
Grand total†	**445,100**	**91,300**	**96,200**
Daily average‡	**2,948**	**3,043**	**3,103**

* Includes lead content of leaded zinc oxide production.
† Includes lead content of scrap used directly in fabricated products.
‡ Based on number of days in month without adjustment for Sundays and holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1957	1958	1959
Jan.	29,657	29,607	28,872
Feb.	29,219	27,855	25,968
Mar.	29,144	29,713	26,691
Apr.	27,246	26,230	29,252
May	31,574	28,839	27,280
June	28,607	28,624	....
July	27,604	27,201	....
Aug.	24,756	21,726	....
Sept.	29,519	28,829	....
Oct.	32,486	31,356	....
Nov.	31,060	28,786	....
Dec.	26,530	27,154	....
Total	**347,699**	**335,920**	....

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1956	1957	1958	1959
Jan.	33.00	33.00	33.00	29.00
Feb.	33.00	33.00	30.818	29.00
Mar.	33.00	33.00	29.00	29.00
Apr.	33.00	33.00	29.00	29.00
May	33.00	33.00	29.00	29.00
July	33.00	33.00	29.00	29.00
July	33.00	33.00	29.00	....
Aug.	33.00	33.00	29.00	....
Sept.	33.00	33.00	29.00	....
Oct.	33.00	33.00	29.00	....
Nov.	33.00	33.00	29.00	....
Dec.	33.00	33.00	29.00	....
Aver.	**33.00**	**33.00**	**29.485**	....

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Apr. 30, 1959	Net receipts in May	Consumed in May	Stocks May 31, 1959
Soft lead	80,606	72,292	64,064	88,834
Antimonial lead	35,095	22,270	21,453	35,912
Lead in alloys	7,269	3,305	3,832	6,742
Lead in copper-base scrap	1,074	1,541	1,599	1,016
Total	124,044	99,408	*90,948	132,504

* Excludes 2,952 tons of lead which went directly from scrap to fabricated products and 266 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

MAY

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	36,987	20,770	3,813	1,599	63,169
Pigments	9,812	10	....	....	9,822
Chemicals	15,386	1	....	....	15,387
Miscellaneous	734	524	....	....	1,258
Unclassified	1,145	148	19	....	1,312
Total	64,064	21,453	3,832	1,599	*90,948

* Excludes 2,952 tons of lead which went directly from scrap to fabricated products and 266 tons of lead contained in leaded zinc oxide production.

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments—Domestic	Shipments—Export & Drawback	Shipments—Gov't Acc't	Shipments—Total	Stock at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,884	931,833	836,800	42,067	39,949	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568		
1952 Total	21,901	961,430	803,343	56,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		85,918	83,968	1,625	7,267	92,860		
1956 Total		1,062,954	869,270	9,027	157,014	1,035,311	68,622	2,904
1956 Mo. Avg.		88,850	72,439	752	13,085	86,275		
1957								
May	105,531	96,855	60,729	2,106	26,858	89,693	112,693	3,124
June	112,693	90,719	54,275	1,358	14,324	69,957	133,455	3,024
July	133,455	85,779	57,862	4,497	11,186	73,055	146,179	2,767
August	146,179	84,166	79,318	860	9,871	81,049	149,296	2,715
September	149,296	77,455	62,111	530	10,344	72,985	153,766	2,582
October	153,766	81,492	66,225	372	12,736	79,333	155,925	2,629
November	155,925	79,754	73,437	581	9,148	83,166	152,531	2,658
December	152,531	86,270	62,730	210	9,188	72,128	166,655	2,783
1957 Total		1,067,450	765,132	15,460	179,466	815,567		
1958								
January	166,655	82,343	58,211	641	9,805	68,657	180,346	2,656
February	180,346	68,354	49,072	446	9,993	59,511	189,189	2,441
March	189,189	72,274	48,948	111	8,763	57,822	203,641	2,331
April	203,641	70,214	46,598	159	5,927	52,684	221,171	2,340
May	221,171	71,018	51,390	129	....	51,519	240,670	2,291
June	240,670	66,967	54,487	171	....	54,658	252,979	2,232
July	252,979	65,119	60,312	55	....	60,187	257,911	2,101
August	257,911	62,927	68,718	591	....	69,309	251,529	2,030
September	251,529	63,705	76,905	213	....	77,118	238,116	2,124
October	238,116	65,304	93,018	226	....	93,224	210,176	2,107
November	210,176	65,174	83,394	212	....	83,606	191,744	2,172
December	191,744	75,503	76,862	148	....	77,010	190,237	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325	....	....
1959								
January	190,237	76,481	70,770	171	....	70,941	195,777	2,467
February	195,777	71,174	65,641	849	....	66,490	200,461	2,542
March	200,461	79,918	73,814	482	....	74,296	206,083	2,578
April	206,083	76,393	78,358	255	....	78,613	203,863	2,546
May	203,863	77,489	85,073	275	....	85,348	196,004	2,500
June	196,004	75,544	99,858*	204	2,100	102,162	169,386	2,518
July	169,386	73,101	59,460	94	900	60,454	182,033	2,358

* Inflated by abnormal shipments on consignment of approximately 9,000 tons.

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1950 Total	**434,094**	**281,385**	**136,451**	**67,779**	**27,656**	**947,365**
1951 Total	**386,373**	**266,442**	**141,456**	**64,000**	**28,738**	**887,009**
1952 Total	**375,563**	**236,022**	**155,311**	**51,508**	**30,885**	**849,289**
1953 Total	**403,162**	**305,846**	**177,301**	**53,784**	**38,087**	**977,636**
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957						
April	30,631	29,166	9,491	4,001	3,300	77,489
May	30,537	28,423	9,563	3,389	3,097	75,909
June	29,907	27,688	8,710	3,613	2,646	73,464
July	26,067	26,116	6,361	2,698	2,981	65,123
August	27,885	29,237	9,755	3,686	3,099	74,562
September	28,651	31,051	9,588	2,911	1,590	75,976
October	32,940	35,499	10,952	3,385	1,783	87,898
November	28,025	31,396	10,024	2,843	1,255	76,595
December	24,383	27,927	7,854	2,679	1,427	67,421
Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
January	26,861	26,348	9,115	3,183	1,664	69,295
February	24,598	22,629	7,279	2,716	1,316	60,347
March	27,171	19,045	6,871	3,138	1,724	59,978
April	27,464	17,829	6,392	3,259	1,295	58,432
May	30,935	18,316	6,597	2,896	2,263	61,907
June	34,377	21,497	6,643	2,961	2,212	67,690
July	30,677	17,387	6,275	2,848	1,920	60,007
August	34,663	20,382	8,358	3,379	1,901	70,033
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,919
November	31,658	27,311	10,067	3,276	826	74,302
December	31,746	29,926	10,529	3,681	1,018	78,082
Total	370,441	273,540	92,906	38,690	16,772	737,942
1959						
January	31,729	29,110	11,172	3,874	2,521	79,506
February	31,672	26,448	11,508	3,418	2,864	77,010
March	37,287	29,286	12,889	3,629	3,203	87,394
April	38,541	31,262	12,304	3,715	3,223	90,145
May	38,788	29,169	12,015	3,316	3,305	88,093

Prime Western Zinc Prices

(East St. Louis, f.o.b.)

(Cents per pound)

(In tons of 2,240 pounds)

	1956	1957	1958	1959
Jan.	13.46	13.50	10.00	11.50
Feb.	13.50	13.50	10.00	11.411
Mar.	13.50	13.50	10.00	11.00
Apr.	13.50	13.50	10.00	11.00
May	13.50	11.933	10.00	11.00
June	13.50	10.84	10.00	11.00
July	13.50	10.00	10.00	11.00
Aug.	13.50	10.00	10.00	....
Sept.	13.50	10.00	10.00	....
Oct.	13.50	10.00	10.865	....
Nov.	13.50	10.00	11.386	....
Dec.	13.50	10.00	11.50	....
Aver.	**13.497**	**11.40**	**10.313**	....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1956	1957	1958	1959
Jan.	14.81	14.85	11.35	12.50
Feb.	14.85	14.85	11.35	12.411
Mar.	14.85	14.85	11.35	12.00
Apr.	14.85	14.85	11.084	12.00
May	14.85	13.283	11.00	12.00
June	14.85	12.19	11.00	12.00
July	14.85	11.35	11.00	12.00
Aug.	14.85	11.35	11.00	....
Sept.	14.85	11.35	11.00	....
Oct.	14.85	11.35	11.865	....
Nov.	14.85	11.35	12.386	....
Dec.	14.85	11.35	12.50	....
Aver.	**14.847**	**12.75**	**11.407**	....

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In Tons of 2,240 Pounds)

	1957	1958	1959
Jan.	28,485	27,473	27,849
Feb.	26,276	24,551	25,676
Mar.	27,049	26,967	27,243
Apr.	24,247	24,984	28,006
May	29,589	24,579	26,167
June	25,202	25,567	....
July	25,934	23,794	....
Aug.	20,381	19,076	....
Sept.	27,792	26,747	....
Oct.	29,552	29,838	....
Nov.	26,705	26,432	....
Dec.	24,419	26,042	....
Total	**315,631**	**306,070**	....

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DAILY METAL REPORTER

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Dec.	13,893	173	18,683	34,364
Total	196,877	29,506	290,151	520,128
1958				
Jan.	16,165	1,682	20,861	38,708
Feb.	13,652	1,365	18,528	33,545
Mar.	13,922	1,291	20,411	35,624
Apr.	15,719	1,311	22,375	39,405
May	15,580	1,314	18,940	35,834
June	14,931	1,490	16,650	32,971
July	13,427	——	15,985	29,442
Aug.	15,760	——	13,627	29,387
Sept.	14,857	——	15,279	29,865
Oct.	16,197	——	16,074	32,271
Nov.	15,393	——	16,998	32,391
Dec.	15,064	——	16,939	32,003
Total	181,202	8,450	213,267	402,919
1959				
Jan.	16,319	——	19,117	35,436
Feb.	16,405	——	19,304	35,709
Mar.	17,602	——	18,822	36,424
Apr.	18,521	——	19,149	37,670
May	18,500	——	19,170	37,670
June	17,501	——	18,548	36,049

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	11,395	141,900	195,034	348,329
1957				
Ttl.	9,300	135,800	188,392	333,493
1958				
Jan.	675	12,513	12,613	25,801
Feb.	542	11,356	11,734	23,632
Mar.	526	4,633	13,148	18,307
Apr.	487	12,438	12,739	25,664
May	626	11,660	11,939	24,225
June	615	10,662	11,499	22,776
July	454	10,019	10,662	21,135
Aug:	447	8,859	9,512	18,818
Sept.	389	7,734	11,221	19,344
Oct.	517	9,290	11,467	21,274
Nov.	606	10,500	11,823	22,929
Dec.	565	9,600	11,699	21,865
Ttl.	6,816	119,070	140,033	265,920
1959				
Jan.	469	9,748	13,180	23,397
Feb.	501	8,457	12,392	21,578
Mar.	601	7,943	12,585	21,129
Apr.	454	8,103	12,635	21,192
May	413	7,253	12,427	20,093
June	458	8,185	12,696	21,339

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
Ttl.	2,174	1,556,450	210,000	1,768,624
1958				
Jan.	207	134,282	2,736	137,226
Feb.	147	116,392	59	116,598
Mar.	174	123,808	96	124,078
Apr.	192	124,705	906	125,615
May	203	124,490	557	125,520
June	182	122,277	8,484	130,943
July	38	116,775	29,735	146,528
Aug.	174	113,281	34,947	148,202
Sept.	156	128,613	38,960	167,459
Oct.	186	135,882	42,467	178,535
Nov.	—	——	——	——
Dec.	—	——	10,373	144,757
1959				
Jan.	—	——	1,003	145,077
Feb.	—	——	233	128,614
Mar.	—	——	106	135,192
Apr.	—	——	106	136,283
June	—	——	490	142,869

* Alaska totals based on mint and smelter receipts.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1957					
Total	610,386	240,000	37,018,950	26,000	37,895,336
1958					
March	38,134	5,500	2,834,641	72	2,878,285
April	38,308	17,800	2,807,664	453	2,863,829
May	41,840	22,870	2,746,539	1,189	2,811,309
June	3,637	21,300	2,775,606	3,154	2,800,681
July	7,723	21,840	2,503,013	4,584	2,533,256
August	8,819	19,970	2,836,937	5,968	2,417,095
September	5,783	17,180	2,621,537	3,392	2,646,193
October	5,653	20,600	2,749,976	5,338	2,781,560
November	†	16,000	†	3,175	2,720,577
December	†	13,730	†	675	2,682,299
Total	†	210,000	†	28,000	33,022,225
1959					
January	†	21,000	†	132	2,751,918
February	†	18,060	†	154	2,892,032
March	†	17,200	†	10	2,965,289
April	†	17,600	†	15	2,957,890
May	†	15,900	†	68	3,033,998

† Figures not available.

* Alaska totals based on mint and smelter receipts.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

(In short tons)

	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	76,934	89,895	116,247	128,203	140,394	147,029	139,910	156,708
Feb.	72,374	92,649	110,483	116,236	132,763	119,059	121,980	142,116
Mar.	77,069	104,460	122,339	130,272	145,895	135,706	134,019	157,189
Apr.	76,880	102,071	120,434	126,394	144,726	139,152	128,559	155,213
May	80,803	105,464	125,138	131,128	150,800	145,174	129,083	163,857
June	77,476	104,152	120,758	127,634	145,726	138,007	115,325	167,323
July	78,368	109,285	126,161	132,669	151,624	142,157	118,811	....
Aug.	85,175	110,545	125,296	133,551	92,406	143,449	125,416	....
Sept.	76,882	109,333	120,332	130,606	132,316	129,278	124,713	....
Oct.	77,312	108,219	125,089	134,655	149,125	133,759	139,847	....
Nov.	74,639	105,636	121,252	133,689	145,081	135,024	140,962	....
Dec.	83,419	110,291	127,056	140,748	148,391	140,033	153,301	....
Ttl.	937,330	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,565,556	....

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957			
Dec.	3,029	2,872	5,901
Total	36,279	34,932	71,211
1958			
January	3,520	3,551	7,071
February	3,589	2,790	6,379
March	2,465	3,568	6,033
April	3,123	3,056	6,179
May	2,597	2,660	5,257
June	3,243	3,210	6,453
July	2,127	2,494	4,621
August	2,651	3,235	5,886
September	2,614	3,165	5,779
October	3,831	2,750	6,581
November	2,505	3,283	5,788
December	3,275	3,652	6,927
Total	35,540	37,414	72,954
1959			
January	2,330	4,460	6,790
February	2,827	2,913	5,740
March	2,823	4,087	6,910
April	2,946	3,233	6,179
May	2,641	3,484	6,125
June	3,219	3,231	6,450

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Average Silver Prices

(Cents per fine ounce)

	1956	1957	1958	1959
Jan.	90.357	91.375	89.449	90.19
Feb.	90.90	91.375	88.625	90.444
Mar.	91.128	91.375	88.625	91.351
Apr.	90.875	91.375	88.625	91.375
May	90.75	91.307	88.625	91.375
June	90.46	90.456	88.625	91.375
July	90.14	90.31	88.625	91.375
Aug.	90.614	90.909	88.625	....
Sept.	90.75	90.602	88.673	....
Oct.	90.722	90.625	89.966	....
Nov.	91.375	90.382	90.125	....
Dec.	91.375	89.80	89.932	....
Aver.	90.79	90.824	89.043	....

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore, conc., matte & other unref. (cont.)	38	456	37
Refined ingots, bars, etc.†	20,571	15,301	12,607
Canada	141	140	477
Cuba	1	1	...
Argentina	110	993	156
Brazil	881	317	604
Belgium	17	...	...
Denmark	112	145	129
France	8,305	3,594	2,189
Germany (W.)	5,458	3,752	3,038
Italy	1,825	1,414	1,494
Netherlands	261	280	1,120
Norway	280	392	308
Sweden	112	180	128
Switzerland	112	112	56
United Kingdom	2,574	2,770	1,469
Yugoslavia	...	...	560
Formosa	...	763	...
Japan	205	448	777
Australia	168	...	101
Other countries	9	...	1
Total Exports:			
Crude & refined	20,609	15,757	12,644
Pipes and tubes	148	48	39
Plates and sheets	19	30	28
Semifabricated forms	605	249	251
Wire, bare	182	429	493
Buildind wire and cable‡	233	172	119
Weatherproof wire†	6	24	26
Insulated copper wire n.e.s.‡	644	*5,725	894

* Figure subject to verification.
† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.
‡ Gross weight; n.e.s.—not elsewhere specified.

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Zinc Ore (content)	48,955	41,875	45,768
Canada	11,164	11,683	11,003
Mexico	8,367	18,774	17,294
Honduras	250	142	362
Bolivia	...	51	...
Chile	...	34	...
Peru	7,949	8,121	11,105
Italy	4,733	1,250	...
Soviet Union†	298	24	...
Spain	4,853	1,446	...
U. of S. Africa	455	...	715
Australia	10,686	283	5,202
Philippines	11	4	3
Other countries	189	63	84
Zinc blocks, pigs, etc.	6,505	17,151	17,744
Canada	3,281	7,685	9,494
Mexico	670	1,561	1,211
Peru	302	3,529	1,493
Belgium	771	...	2,451
Italy	960	220	771
Yugoslavia	..	220	882
Belgian Congo	149	1,535	882
Rhodesia & Nyasaland	...	...	560
Australia	372	2,401	...
Total Imports:			
Zinc ore, blocks, pigs	55,460	59,026	63,512
Dross and skim.	122	49	11
Old and worn out	1	...	...

* According to the records of the Bureau of the Census. (Subject to verification.)

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore, matte, etc. (content)	9,333	4,470	12,257
Canada	1,573	2,591	2,127
Mexico	53	34	32
Honduras	249	197	225
Bolivia	...	398	...
Peru	887	739	5,205
U. of S. Africa	4,323	...	3,652
Australia	2,196	436	1,010
Philippines	28	53	6
Other countries	24	22	...
Base bullion (content)	5	...	...
Other countries	5	...	...
Pigs and bars	24,258	36,205	26,135
Canada	3,331	5,272	9,657
Mexico	11,775	12,832	5,569
Peru	19	5,624	4,554
Spain	...	...	952
Sweden	2,205	330	...
U. Kingdom	298	...	...
Yugoslavia	882	6,870	546
Morocco	2,125	...	...
Australia	3,620	5,277	4,731
Other countries	3	...	126
Total Imports:			
Ore base bullion, refined	33,596	40,675	38,392
Lead scrap, dross, etc. (cont.)	370	245	1,253
Antimonial lead & typemetal	475	610	690
Lead content thereof	448	491	635

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore, conc. (content)	...	1	...
Slabs, blocks, etc.	350	124	151
Canada	...	3	4
Mexico	94	55	...
Brazil	...	...	48
Chile	...	..	15
Sweden	123	...	...
United Kingdom	67	45	84
India	52	...	...
Other countries	14	21	...
Total Exports:			
Ore, conc., slabs, blocks	350	125	151
Scrap, ashes, dross and skimmings	305	238	561
Battery shells and parts, unassembled	...	10	28
Rolled in sheets, plates and strips and die castings	290	319	259
Zinc & zinc alloys in crude and semifabricated forms	167	44	19
Zinc Oxide	308	212	314

Comparative Metal Prices

	Av. 1939	OPA Av. 1946	1959 Aug. 21
Copper, domestic Electro., Del. Val	11.20	14.375	30.00
Lead (N. Y.)	5.05	8.25	12.00
P. W. Zinc (E. St. Louis, f.o.b.	5.05	5.05	11.00
New York, del.	...	...	11.50
Tin, Spot Straits, N. Y.	...	...	102.875
Aluminum ingot 99½%+	20.00	15.00	Nom. 26.80
Antimony (R.M.M. brand, f.o.b. Laredo)	12.36	14.50	29.00

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore, matte & regulus (cont.)	4,624	3,974	12,112
Canada	456	34	921
Mexico	157	116	163
Cuba	...	...	1,175
Argentina	...	9	...
Bolivia	11	1	317
Chile	883	1,687	520
Peru	87	347	332
Cyprus	...	1,739	1,786
Philippines	1,581	...	2,739
U. of S. Africa	1,370	...	4,159
Australia	77	22	...
Other countries	2	19	...
Blister copper (content)	20,678	18,879	27,757
Mexico	1,359	1,866	3,299
Chile	14,517	15,902	17,532
Rhodesia & Nyasaland	1,478	...	5,259
U. of S. Africa	1,111	1,111	1,667
Australia	2,209	...	...
Other countries	4	...	...
Refined cathodes and shapes	5,027	11,777	19,320
Canada	4,003	8,566	9,562
Mexico	28	161	1,595
Chile	100	...	2,000
Peru	...	1,332	1,503
Belgium	...	28	56
Germany (W.)	...	280	1,792
Sweden	560	...	104
United Kingdom	...	...	559
Belgian Congo	..	300	940
Rhodesia & Nyasaland	336	410	1,148
U. of S. Africa	...	700	61
Total Imports:			
Crude & refined	30,329	34,630	59,189
Old and scrap (content)	300	709	793
Brass scrap and old (cu. cont.)	120	473	351

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Copper, scrap, unalloyed* (new and old)	1,533	796	200
Canada	339	114	33
Argentina	818	274	...
France	...	59	...
Germany (W.)	88	86	44
Hungary	83	27	27
Italy	139	28	...
Netherlands	...	22	...
India	66	153	..
Japan	...	33	68
Other countries	...	...	28
Copper-base scrap, alloyed† (new and old)	2,029	3,077	3,212
Canada	4	...	3
Mexico	...	...	3
Germany (W.)	149	311	311
Netherlands	54	37	78
Spain	34	21	...
India	76	121	78
Japan	1,568	2,483	2,600
Hong Kong	130	61	139
Other countries	15	43	...

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.
† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b)	Mexico (crude) (c)	Chile (d)	Peru (d)	Fed. Rep. of Germany (e)	Norway (f)	United Kingdom (g-h)	Yugoslavia (e)	India (f-h)	Japan (e)	Turkey (f)	Australia (e)	Northern Rhodesia (e)	Union of South Africa (d)
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Total	1,115,483	360,745	42,905	....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1958															
Jan.	94,735	32,841	5,272	41,578	3,990	23,790	1,554	7,909	3,000	348	12,345	2,091	4,334	42,996	4,285
Feb.	87,130	30,639	4,849	39,648	3,235	21,792	1,340	11,495	3,054	756	10,806	1,509	4,045	36,364	4,708
Mar.	90,336	34,190	5,954	40,205	3,497	25,161	1,569	9,559	6,023	821	10,195	2,580	5,555	44,847	4,731
April	86,123	32,635	6,101	16,115	4,010	23,286	1,463	9,884	3,149	788	8,515	2,942	6,220	41,396	4,413
May	80,628	32,471	6,141	23,264	3,481	24,543	1,636	7,095	2,957	786	9,806	2,574	6,229	41,615	4,488
June	71,092	32,418	5,954	34,811	3,405	23,128	1,674	7,414	3,102	769	10,617	1,810	6,819	44,447	4,018
July	64,444	31,131	5,995	40,495	3,780	24,418	1,610	9,091	3,245	801	10,762	1,136	6,139	44,010	3,324
Aug.	67,917	30,867	6,340	45,211	3,646	26,409	1,855	3,451	2,838	786	11,053	....	6,220	42,000	4,974
Sept.	79,541	27,546	6,294	40,913	3,637	24,649	1,749	12,027	2,870	792	12,583	....	....	17,291	4,726
Oct.	92,214	22,572	5,380	47,230	2,950	27,635	1,618	11,225	3,616	809	13,310	....	....	....	4,749
Nov.	96,369	20,368	5,040	46,310	3,923	24,932	1,594	8,542	3,462	774	11,764	....	....	25,612	4,249
Dec.	97,641	19,023	5,066	46,284	3,196	25,569	1,597	9,042	2,929	832	15,054	....	....	45,935	4,406
Total	1,881,170	346,816	68,386	462,064	42,750	295,312	19,529	106,134	37,116	9,062	136,612	24,676	72,361	426,513	53,090
1959															
Jan.	95,542	24,669	5,342	44,579	3,115	25,945	1,724	7,356	3,685	679	17,385	2,469	5,349	48,699	4,600
Feb.	88,432	28,016	4,810	43,589	1,627	24,289	1,599	9,211	3,521	557	11,388	1,614	5,930	44,420	4,339
Mar.	101,410	32,427	4,771	44,554	1,601	26,959	1,694	8,654	3,536	810	10,746	2,034	....	51,630	4,611
April	98,376	32,130	5,201	42,715	4,250	26,859	1,870	11,259	3,593	763	17,938	....	....	48,150	....
May	104,236	32,467	5,275	....	3,770	25,178	....	7,693	....	764	....	....	....	53,067	....
June	98,919	....	5,847	....	3,357	....	....	....	....	....	....	....	....	53,895	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Total	604,533	142,935	218,266	55,971	....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,442	27,069	12,364	2,041,530
1958																
Jan.	47,665	12,672	20,144	5,188	8,375	7,501	18,017	4,013	5,297	6,042	4,974	25,518	3,323	1,785	1,232	173,922
Feb.	47,133	11,432	18,341	5,306	8,347	7,959	15,939	4,433	5,337	7,452	4,352	23,628	3,326	2,781	1,176	167,791
Mar.	43,441	12,837	18,455	6,899	8,773	7,890	16,548	4,597	6,392	8,600	4,335	26,359	3,375	1,174	1,204	171,654
April	40,984	11,785	21,099	5,626	8,917	8,858	15,144	4,652	6,281	7,021	3,481	19,876	2,338	2,394	1,204	160,946
May	47,487	12,212	21,005	5,421	9,058	8,339	16,327	2,402	6,944	7,482	3,541	25,035	3,532	2,978	1,204	174,255
June	44,636	12,706	17,846	6,255	8,264	7,977	15,194	3,677	6,403	6,469	3,461	22,979	2,906	3,127	1,232	164,278
July	38,827	7,175	18,315	6,880	8,548	8,319	11,229	4,581	6,327	6,872	3,567	21,563	2,767	568	1,232	147,624
Aug.	39,250	6,940	17,991	6,100	7,495	15	13,760	4,584	6,913	5,414	3,610	19,942	2,584	2,756	1,176	140,501
Sept.	43,269	10,908	16,256	5,192	7,849	8,202	15,700	4,367	5,692	6,942	3,587	22,632	2,184	2,369	1,120	158,285
Oct.	45,467	12,598	11,968	5,074	7,940	9,308	17,130	4,639	7,121	9,242	3,522	22,482	3,560	2,410	1,176	164,818
Nov.	40,486	10,645	17,067	6,448	9,495	9,068	17,785	4,825	6,914	11,155	3,555	20,148	2,625	2,519	1,120	165,406
Dec.	44,042	11,076	20,902	5,344	10,342	10,351	18,370	5,101	7,069	11,212	3,769	21,492	4,002	2,779	1,120	179,309
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	1,955,753
1959																
Jan.	43,662	14,073	19,031	4,951	10,761	6,694	18,658	4,636	6,215	4,082	6,086	24,470	2,575	1,068	1,344	169,256
Feb.	39,498	12,740	15,472	2,662	9,460	5,812	17,869	4,437	6,020	8,596	6,474	22,037	2,319	1,765	1,344	157,928
Mar.	39,238	13,704	16,305	3,424	8,447	6,733	17,553	3,168	6,196	8,153	6,889	20,144	1,905	2,429	1,344	156,914
April	40,606	12,655	16,621	4,438	8,038	5,541	17,411	4,942	6,491	6,876	6,736	23,919	2,726	2,155	1,344	.....
May	39,101	....	16,934	6,606	8,797	7,363	12,728	3,614	7,435	....	....	....	2,050	1,784	1,344	.....
June	.....	.....	.....	6,540	.....	.....	.....	2,453	.....	.....	....	....	....	.....	.....	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru (b-c)	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway (b)	Spain	Yugoslavia	Japan (a)	Australia (b)	Rhodesia (b)	Total (d)
1955																	
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956																	
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
1957																	
Total	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,691,699
1958																	
Jan.	82,343	21,801	5,561	3,271	22,382	12,795	17,187	7,179	4,911	2,654	4,134	2,209	2,943	13,126	10,816	2,828	221,112
Feb.	68,354	19,743	4,985	2,669	22,026	12,028	15,562	6,599	5,275	2,659	4,030	1,975	2,797	12,072	9,642	2,576	199,114
Mar.	72,274	22,314	5,620	2,782	21,453	13,786	16,743	7,584	6,549	2,709	3,851	2,045	3,013	13,217	10,707	2,856	214,049
April	70,214	20,989	5,289	2,597	20,886	14,985	15,693	8,018	6,925	2,586	3,850	2,207	2,853	9,305	10,424	2,772	204,625
May	71,018	21,269	5,254	2,699	20,949	15,279	16,128	6,343	7,202	2,442	3,962	2,372	2,871	13,504	10,918	2,856	211,529
June	66,967	20,354	5,016	2,429	20,094	14,243	15,663	7,202	7,731	2,221	3,307	2,309	2,854	14,040	10,988	2,744	204,067
July	65,119	20,878	5,285	2,520	19,556	14,295	16,210	7,140	5,879	2,471	3,815	2,296	2,928	15,835	10,742	2,884	203,828
Aug.	62,297	21,152	5,216	2,822	18,308	14,253	16,204	6,689	5,991	2,533	3,793	2,259	2,820	12,420	11,075	2,912	.....
Sept.	63,705	20,531	5,025	2,640	17,961	12,232	15,635	6,887	5,991	2,533	3,793	2,259	2,820	12,420	11,075	2,912	199,142
Oct.	65,304	21,125	5,344	2,305	17,866	14,176	16,462	6,046	6,442	2,820	4,915	2,313	2,793	14,436	11,045	2,940	203,169
Nov.	65,174	20,274	5,197	2,625	18,696	13,274	16,196	6,158	5,874	2,249	4,669	2,244	3,370	13,501	10,508	2,828	197,481
Dec.	75,503	21,705	5,537	2,686	19,402	13,844	17,090	7,564	6,344	2,332	4,755	2,262	2,684	12,473	10,860	2,856	213,093
Total	892,607	254,661	18,354	34,685	257,540	177,422	210,408	80,494	5,955	2,841	54,423	26,750	34,446	166,883	128,548	39,508	2,464,639
1959																	
Jan.	76,481	21,456	5,476	2,753	19,857	13,903	17,164	5,955	5,617	2,693	4,826	2,028	2,647	11,679	10,541	2,800	211,506
Feb.	71,174	19,709	4,915	1,497	19,838	13,491	15,632	6,123	4,735	2,927	4,928	1,926	2,510	14,105	9,617	2,548	199,495
Mar.	79,918	22,135	5,439	2,363	20,215	14,230	17,325	7,797	6,801	2,921	4,917	2,369	3,014	13,217	10,759	2,800	.....
Apr.	76,393	21,512	5,225	2,502	20,408	14,087	16,426	6,030	7,039	2,816	3,621	2,239	2,509	15,645	10,472	2,716	.....
May	77,489	21,147	5,108	2,545	21,181	13,902	16,633	....	7,790	2,823	4,798	2,273	....	....	11,137	2,744	.....
June	75,544	21,250	4,776	2,524	....	....	....	8,271	7,164	2,899	4,759	....	....	....	....	....	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrochemic. (d) The above totals omit production in Russia, Czechoslovakia, Poland and in Argentina.

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

At start of:	Virgin Zinc 1958	Virgin Zinc 1959	Zinc Conc. 1958	Zinc Conc. 1959
Jan.	44,926	34,166	79,349	56,371
Feb.	43,308	34,805	82,125	58,518
Mar.	46,662	36,850	87,721	57,897
Apr.	46,608	38,457	84,631	52,151
May	47,251	38,643	80,964	47,936
June	50,539	37,713	74,470	41,954
July	49,613	....	71,553	....
Aug.	48,497	....	70,105	....
Sept.	45,590	....	63,909	....
Oct.	45,784	....	57,376	....
Nov.	39,341	....	53,371	....
Dec.	35,396	....	58,022	....

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

(Gross Weight)	1959 Mar.	1959 Apr.	1959 May
Zinc ore and conc.	6,156	4,583	4,519
Zinc conc.†	2,742	2,476	‡
Australia	2,155	1,560	...
Burma	535	3	...
Other countries	52	913	...
Zinc and zinc alloys: (Gross Wt.)	15,437	14,984	12,764
Rhodesia-Nyasaland	175	200	300
Australia	975	...	825
Canada	7,825	8,502	5,491
Belgium	1,484	1,196	2,515
Germany (W.)	801	125	...
Netherlands	719	700	500
Soviet Union	1,412	1,412	1,187
United States	8	290	381
Belgian Congo	500	825	700
Other countries	1,538	1,734	865

† British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.

‡ Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

(Gross Weight)	1959 Mar.	1959 Apr.	1959 May
Copper unwrought —ingots, blocks, slabs, bars, etc.	5,901	5,002	4.248
Plates, sheets, rods, etc	1,342	1,600	1,529
Wire (including uninsulated electric wire)	423	364	327
Tubes	1,013	1,326	1,255
Other copper, worked (including pipe fittings)	65	134	58
Total	8,744	8,426	7,417

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957 Total	407,326	234,158	641,484	507,493	133,991
1958					
January	35,799	20,816	56,615	46,437	10,178
February	32,207	19,352	51,559	37,907	13,652
March	33,491	19,580	53,071	41,539	11,532
April	36,722	19,100	55,822	43,784	12,038
May	35,810	18,423	54,233	43,571	10,662
June	39,277	18,141	57,418	46,080	11,338
July	36,743	17,091	53,564	42,373	11,191
August	28,416	13,756	42,181	33,073	9,108
September	42,813	18,596	61,408	52,018	9,390
October	43,402	21,788	65,190	53,937	11,253
November	40,987	19,232	60,219	47,932	12,287
December	37,580	19,118	56,698	45,968	10,730
Total	442,977	225,001	667,978	534,619	133,359
1959					
January	32,678	21,217	52,979	39,815	13,164
February	29,373	19,020	48,293	35,775	12,518
March	27,864	19,567	47,431	36,124	11,307
April	32,742	22,782	55,525	43,015	12,509
May	28,421	19,199	47,620	33,367	14,253

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks

(In long tons)

(British Bureau of Non-Ferrous Metal Statistics)

At start of:	1957	1958	1959
Jan.	59,614	91,477	64,184
Feb.	59,203	82,483	65,941
Mar.	62,120	89,147	65,875
Apr.	61,779	94,330	72,946
May	71,101	88,582	72,318
June	61,991	88,913	78,505
July	64,121	81,851	....
Aug.	81,146	84,756	....
Sept.	98,595	89,899	....
Oct.	100,815	85,092	....
Nov.	90,877	74,686	....
Dec.	81,657	69,023	....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of:	1957	1958	1959
Jan.	39,420	51,295	45,444
Feb.	41,433	49,134	48,102
Mar.	36,900	47,738	40,535
Apr.	34,877	40,547	53,289
May	44,933	37,509	62,286
June	40,804	34,608	63,135
July	42,148	40,518	....
Aug.	48,275	37,148	....
Sept.	51,435	43,758	....
Oct.	45,301	48,856	....
Nov.	50,371	40,216	....
Dec.	48,065	35,335	....

Zinc Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

IMPORTS	1959 Mar.	1959 Apr.	1959 May
U. S. (s.t.)	16,005	6,505	17,151
Canada (s.t.)	1	...	...
Belgium	4	...	..
Denmark	1,805	928	1,108
France	875	1,451	1,160
Germany, (W.)*	6,603	...	...
Italy	639	...	...
Netherlands	775	1,255	1,253
Sweden	1,019	2,006	...
Switzerland*	777	1,008	864
U. K. (l.t.)	15,437	14,984	12,764
India†	5,354	3,972	4,446
EXPORTS			
U. S. (s.t.)	745	350	124
Canada (s.t.)	22,731	7,690	...
Belgium	9,648	...	...
Denmark	3	207	139
France	...	...	521
Germany, (W.)*	2,828	...	...
Italy	1,967	...	...
Netherlands	1,138	1,126	931
Norway	3,979	...	...
Switzerland*	398	536	686
U. K.** (l.t.)	401	505	616
Northern Rhodesia† (l.t.)	2,565	2,452	2,533
Australia† (l.t.)	6,176	4,588	5,175

* Includes scrap.
** Includes manufactures.
† British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore: Imports	Tin Content of Tin in Ore: Production*	Tin Content of Tin in Ore: Stock at end of period*	Tin Metal: Imports	Tin Metal: Production*	Tin Metal: Consumption	Tin Metal: Exports & Re-exports	Tin Metal: Stock at end of period
1957 Total	39,272	1,028	....	9,834	34,175	20,365	7,362	71,931
1958								
June	1,315	104	2,431	1,029	2,964	1,719	912	21,715
July	2,007	107	2,020	329	2,904	1,656	478	20,880
August	2,235	44	2,063	1,525	2,423	1,412	912	19,676
September	1,743	99	1,564	1,141	2,579	1,784	988	19,942
October	1,913	91	1,419	145	2,488	2,072	882	20,135
November	1,971	96	1,770	851	2,187	1,795	594	19,285
December	2,757	90	2,299	317	2,350	1,802	1,770	19,054
1958 Total	27,419	1,090	....	13,195	32,551	20,413	20,398	19,054
1959								
January	1,337	113	1,095	324	2,925	1,769	2,381	16,744
February	1,817	115	1,300	230	1,677	1,614	4,153	14,715
March	1,545	100	1,595	....	1,572	1,773	2,653	13,264
April	1,743	....	1,798	....	1,636	1,745	3,326	10,685
May	1,493	....	....	28	1,808	1,686	2,421	9,445

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)

(In Tons)

	1956	1957	1958	1959
Jan.	26,653	25,469	32,868	24,664
Feb.	26,229	21,861	28,668	28,016
Mar.	26,750	27,663	29,239	32,427
Apr.	26,617	27,398	30,635	32,130
May	27,626	29,086	32,471	32,467
June	27,122	24,093	32,418	....
July	27,250	27,195	31,131	....
Aug.	29,219	26,943	30,867	....
Sept.	27,950	24,633	27,546	....
Oct.	29,696	30,312	22,572	....
Nov.	27,346	27,331	20,368	....
Dec.	28,716	31,604	19,033	....
Year	331,174	323,588	346,816	....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)

(In Tons)

	1956	1957	1958	1959
Jan.	15,981	20,582	26,883	10,620
Feb.	11,041	16,272	16,816	10,304
Mar.	12,276	14,270	18,662	11,025
Apr.	14,476	16,417	23,261	17,079
May	12,851	19,048	19,358	21,739
June	10,985	10,826	20,831	....
July	13,599	18,621	21,703	....
Aug.	14,710	21,980	15,881	....
Sept.	17,268	14,314	15,373	....
Oct.	13,896	13,110	20,341	....
Nov.	19,130	16,622	14,391	....
Dec.	18,630	16,282	11,138	....
Year	174,843	198,794	224,638	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1956	1957	1958	1959
Jan.	16,002	14,032	17,117	17,118
Feb.	14,344	15,170	14,908	15,923
Mar.	16,857	16,940	15,421	17,389
Apr.	11,573	14,275	15,644	16,237
May	15,446	14,591	15,131	16,813
June	18,145	16,431	15,645	....
July	15,841	14,377	14,076	....
Aug.	16,104	14,679	12,260	....
Sept.	15,760	15,869	15,401	....
Oct.	16,725	14,151	14,564	....
Nov.	14,865	15,879	16,680	....
Dec.	16,056	15,296	18,248	....
Year	188,971	171,690	185,095	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)

(In Tons)

	1956	1957	1958	1959
Jan.	4,888	8,946	4,752	5,034
Feb.	3,856	6,633	1,553	6,377
Mar.	4,007	7,044	9,497	11,831
Apr.	7,636	7,314	7,450	7,836
May	7,214	9,676	7,764	12,230
June	6,632	7,210	4,036	....
July	9,696	4,682	12,629	....
Aug.	4,713	6,416	7,232	....
Sept.	9,908	8,467	5,125	....
Oct.	9,072	7,761	10,320	....
Nov.	9,227	6,175	10,641	....
Dec.	2,734	4,217	11,352	....
Year	79,633	84,541	92,351	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)

(In Tons)

	1956	1957	1958	1959
Jan.	21,696	20,340	21,801	21,456
Feb.	20,356	19,808	19,743	19,709
Mar.	22,010	21,941	22,314	22,135
Apr.	21,339	20,504	20,989	21,512
May	21,790	20,564	21,269	21,147
June	20,780	19,928	20,353	....
July	21,691	20,061	20,873	....
Aug.	21,354	20,305	21,152	....
Sept.	20,691	20,247	20,530	....
Oct.	21,412	20,892	21,125	....
Nov.	20,470	20,933	20,273	....
Dec.	22,012	21,823	21,705	....
Year	255,607	247,351	252,157	....

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)

	1956	1957	1958	1959
Jan.	15,550	19,304	17,349	13,565
Feb.	11,757	16,618	8,376	12,675
Mar.	8,822	14,923	19,636	14,617
Apr.	14,317	17,131	16,346	12,789
May	11,357	16,680	15,121	11,049
June	15,296	16,157	7,776	....
July	15,499	12,912	27,394	....
Aug.	13,070	20,520	15,906	....
Sept.	19,732	17,671	8,670	....
Oct.	20,792	16,735	22,810	....
Nov.	21,411	17,225	17,978	....
Dec.	16,125	16,131	18,344	....
Year	183,728	202,007	195,707	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)

(Fine Ounces)

	1957	1958	1959
Jan.	253,940	634,715	185,367
Feb.	380,463	208,149	329,742
Mar.	521,849	350,827	425,973
Apr.	431,646	284,971	989,593
May	523,228	376,082	564,017
June	468,559	438,253	.....
July	844,545	529,770	.....
Aug.	811,530	279,511	.....
Sept.	861,857	583,570	.....
Oct.	432,000	323,475	.....
Nov.	263,273	217,892	.....
Dec.	186,569	871,573	.....
Year	5,979,459	5,098,788	.....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1957	1958	1959
Jan.	2,158,631	2,529,583	3,094,440
Feb.	2,051,679	2,294,655	2,264,903
Mar.	2,346,316	2,448,698	2,782,307
Apr.	2,225,638	2,558,958	2,691,346
May	2,111,185	2,650,665	2,481,875
June	2,208,584	2,527,632	.....
July	2,383,390	2,385,687	.....
Aug.	2,592,468	2,884,154	.....
Sept.	2,382,121	2,856,304	.....
Oct.	2,817,358	2,390,027	.....
Nov.	2,566,519	2,643,790	.....
Dec.	2,537,984	2,917,528	.....
Year	28,361,873	31,087,681	.....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1956	1957	1958	1959
Jan.	14,985	16,609	16,710	8,047
Feb.	14,997	15,027	15,896	12,616
Mar.	15,504	16,733	15,853	14,922
Apr.	14,431	15,347	15,163	15,493
May	15,203	16,225	15,231	16,622
June	14,492	15,447	14,603	....
July	15,125	15,878	12,851	....
Aug.	14,852	16,756	12,597	....
Sept.	14,530	15,604	11,786	....
Oct.	15,762	15,628	3,682	....
Nov.	15,062	14,587	3,178	....
Dec.	14,824	15,096	3,298	....
Year	178,767	188,962	140,842	....

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore, matte, regulus, etc. (content)	2,013	1,315	3,580
United States	883	91	971
Belgium	...	...	126
Germany (W.)	...	...	46
Norway	1,053	1,094	1,821
United Kingdom	77	130	71
Japan	...	...	545
Ingots, bars, billets, anodes	17,079	21,738	21,310
United States	4,171	8,195	10,055
Brazil	95	...	...
Belgium	831	...	276
France	1,232	1,129	1,348
Germany (W.)	784	952	1,030
Greece	...	112	56
Italy	...	112	...
Netherlands	...	...	112
Portugal	...	56	55
Sweden	...	...	224
United Kingdom	9,907	10,176	6,430
Australia	...	...	280
India	...	1,003	1,164
Pakistan	...	...	280
Other countries	59	3	..
Total Exports:			
Crude & refined	19,092	23,053	24,890
Old and scrap	430	342	244
Rods, strips, sheet & tubing	798	2,010	1,592

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore (zinc content)	12,789	11,049	20,298
United States	12,789	11,049	18,511
Belgium	...	...	1,787
Slab zinc	7,690	20,647	16,878
United States	3,352	7,955	9,412
Brazil	221	46	15
Chile	83	55	...
Denmark	112	..	...
Germany (W.)	56	112	56
Netherlands	...	392	336
United Kingdom	3,573	11,896	6,452
Korea	...	53	573
Hong Kong	249	...	...
Taiwan	22	138	...
Other countries	22	...	34
Total Exports:			
Ore and slabs	20 479	31,696	37,176
Zinc scrap, dross, ashes	124	369	864
United States	124	50	81
Belgium	...	319	724
Netherlands	..	...	59

French Copper Imports

(A. B. M. S.)

(In metric tons)

	1959		
	Apr.	May	June
Crude copper for refining (blister, black and cement)	813	...	406
Belgian Congo	813	...	406
Refined	21,455	13,975	11,462
United States	10,796	5,997	1,421
Canada	816	805	1,267
Chile	...	51	980
Belgium	4,746	3,661	3,542
Germany (W.)	145	213	...
Norway	153	178	178
U. Kingdom	22	...	...
Belgian Congo	2,558	1,059	2,529
Rhodesia-Nyasaland	2,219	2,011	1,545

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1959		
	Apr.	May	June
Ore (lead content)	3,241	1,554	14,539
United States	3,241	1,554	3,069
Belgium	...	...	2,999
Germany (W.)	...	...	8,471
Refined lead	7,836	12,230	15,610
United States	3,624	5,579	10,500
Brazil	...	70	...
Uruguay	102	...	194
Thailand	112	..	...
Netherlands	...	112	...
United Kingdom	2,576	6,372	4,857
Taiwan	132	36	...
Denmark	1,232	...	...
Other countries	58	61	59
Total Exports:			
Ore & refined	11,077	13,784	30,149
Lead scrap	49	241	319

Copper Imports and Exports By Principal Countries

(A.B.M.S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1959		
	Mar.	Apr.	May
IMPORTS			
U. S. (blist., s.t.)	23,636	20,678	18,879
(ore, etc., s.t.)	8,932	4,624	3,974
(ref., s.t.)	3,815	5,027	11,777
Belgium*	19,537	...	...
Denmark	252	311	305
France (crude)	111	813	...
(refined)	16,927	21,455	13,975
Italy	9,770	...	...
Germany, (W.)	28,497	...	...
Netherlands	1,375	2,576	1,512
Norway	458	...	...
Sweden	5,376	3,661	...
Switzerland	3,018	4,555	1,618
U. K (l.t.)	44,291	36,627	37,171
India blister/-ref., l.t.)†	1,865	5,375	2,342
EXPORTS			
U. S. (ore and unref., s.t.)	401	38	456
(refined, s.t.)	19,404	20,571	15,301
Canada (refined, s.t.)	11,025	17,079	...
Belgium*	15,002	...	...
Finland††	1,583	1,064	...
Germany, (W.)	4,792	...	...
Norway	2,473	...	...
Sweden	1,044	1,057	...
U. K. (l.t.)	5,901	5,002	4,248
No. Rhodesia (blister — ref., l.t.)†	38,405	41,647	50,542

* Includes alloys.

†† Includes old.

† British Bureau of Non-Ferrous Metal Statistics.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxides, matte, etc.)

(In Tons)

	1957	1958	1959
January	14,260	14,233	6,757
February	9,974	12,157	7,976
March	14,958	12,316	14,006
April	18,671	20,962	14,213
May	18,351	20,574	16,142
June	14,539	16,144	.....
July	14,181	14,055	.....
August	14,966	13,012	.....
September	14,160	14,371	.....
October	13,370	8,385	.....
November	16,620	3,001	.....
December	14,606	5,060	.....
Year	178,656	154,220	.....

French Zinc Imports

(A. B. M. S.)

(In metric tons)

	1959		
	Apr.	May	June
Ore (gross weight)	13,974	18,022	19,278
Belgium	...	2,308	75
Greece	860	1,712	...
Italy	3,602	1,892	6,264
Yugoslavia	...	1,100	...
Algeria	3,237	630	10,217
Morocco	4,411	10,380	2,722
Tunisia	1,864	...	...
Slabs, bars, blocks, etc.	1,451	1,160	1,573
Belgium	1,360	620	1,339
Italy	91	528	223
Algeria	...	12	11

French Metal Exports

(A. B. M. S.)

(In metric tons)

	1959		
	Mar.	Apr.	May
LEAD			
Ore (gr. wt.)	1,055	704	268
Pig lead	2,631	1,032	444
Uruguay	90	...	71
Denmark	559	203	203
Germany (W.)	330	654	170
Sweden	508	...	...
Switzerland	245	50	...
United Kingdom	762	...	...
Other countries	137	125	...
Antimonial lead	253	52	160
ZINC			
Slabs, bars, blocks, etc.	...	...	521

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1959		
	Mar.	Apr.	May
(Gross Weight)			
Copper and copper alloys	44,291	36,627	37,171
U. of S. Africa	...	...	2,287
Rhodesia-Nyasaland	21,883	15,882	19,269
Canada	8,074	7,489	7,042
Belgium	4	2	8
Germany (W.)	38	23	19
Norway	400	200	200
Sweden	...	1	...
United States	4,276	2,605	1,875
Chile	9,350	10,150	5,951
Belgian Congo	250	250	500
Other countries	16	25	20
Of which: Electrolytic	28,675	25,659	23,400
Other refined	5,230	4,870	5,288
Blister or rough	10,319	6,000	8,161
Wrought and alloys	67	98	322
Total	44,291	36,627	37,171

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957					
Dec.	53,102	65,708	1,533	49,597	1,399
Total	751,856	875,389	30,322	663,330	23,791
1958					
January	57,845	69,707	1,881	50,658	1,566
February	50,695	58,356	1,803	42,687	1,294
March	50,547	60,157	1,975	39,719	1,630
April	44,948	59,311	2,215	35,796	1,467
May	44,093	57,506	2,422	36,447	1,655
June	40,701	57,124	2,205	38,132	1,971
July	38,818	51,124	2,200	32,765	1,394
August	45,034	57,790	1,869	35,860	1,804
September	52,796	64,447	2,804	47,127	1,725
October	55,699	74,012	2,627	45,045	1,708
November	55,793	62,476	2,615	48,431	1,409
December	59,487	67,905	2,612	55,600	1,497
Total	596,816	739,915	27,228	508,297	18,920
1959					
January	62,927	66,874	2,151	53,347	1,571
February	62,486	69,589	2,162	48,779	1,285
March	73,351	78,641	2,129	57,600	1,765
April	72,976	82,799	2,455	57,325	1,862
May	68,279	78,315	2,353	60,658	2,025

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957					
Nov.	70,187	63,944	3,006	862	2,375
Dec.	65,708	59,606	3,046	888	2,168
Total	875,389	789,819	44,746	10,776	30,048
1958					
January	69,707	63,294	3,327	894	2,192
February	58,356	52,579	3,202	796	1,779
March	60,157	54,007	3,395	823	1,932
April	59,311	53,271	3,385	949	1,705
May	57,506	51,634	3,077	891	1,904
June	57,124	51,967	3,001	839	1,317
July	51,124	46,636	2,351	792	1,345
August	57,590	52,981	2,425	682	1,702
September	64,447	58,435	2,888	876	2,248
October	74,012	67,564	3,239	790	2,419
November	62,746	57,386	2,604	810	1,946
December	67,905	61,119	3,535	1,059	2,192
Total	739,985	667,255	36,529	10,201	22,681
1959					
January	66,874	59,856	3,572	1,216	2,230
February	66,589	62,593	3,557	1,176	2,263
March	78,641	69,472	4,333	1,361	3,475
April	82,799	73,567	4,640	1,328	3,264
May	78,315	69,253	4,363	1,291	3,408

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included
(Cents per pound)

	1956	1957	1958	1959
Jan.	64.50	74.00	74.00	74.00
Feb.	64.50	74.00	74.00	74.00
Mar.	64.50	74.00	74.00	74.00
Apr.	64.50	74.00	74.00	74.00
May	64.50	74.00	74.00	74.00
June	64.50	74.00	74.00	74.00
July	64.50	74.00	74.00	74.00
Aug.	64.50	74.00	74.00	....
Sept.	64.50	74.00	74.00	....
Oct.	64.50	74.00	74.00	....
Nov.	64.50	74.00	74.00	....
Dec.	72.48	74.00	74.00	....
Aver.	65.165	74.00	74.00	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1956	1957	1958	1959
Jan.	106.30	101.92	77.85	52.57
Feb.	104.34	98.59	74.82	59.25
Mar.	104.23	93.50	72.096	77.10
Apr.	103.92	93.45	70.72	77.18
May	105.23	92.865	67.34	77.50
June	106.50	92.02	66.18	77.50
July	106.50	90.265	64.35	78.00
Aug.	105.76	84.426	60.94	....
Sept.	105.50	84.00	59.60	....
Oct.	104.85	84.00	57.327	....
Nov.	104.50	83.80	56.41	....
Dec.	104.50	78.70	53.154	....
Aver.	105.18	89.79	65.07	....

Spot Straits Tin

(Straits, Open Market, N. Y.)
Monthly Average Prices

	1956	1957	1958	1959
Jan.	105.036	101.511	92.94	99.411
Feb.	100.803	101.132	93.915	102.785
Mar.	100.786	99.643	94.452	103.042
Apr.	92.268	99.304	92.988	102.505
May	96.994	93.347	94.512	103.125
June	94.589	98.05	94.708	104.25
July	96.143	96.52	94.892	102.237
Aug.	99.049	94.261	94.988	....
Sept.	103.809	93.406	94.101	....
Oct.	106.023	91.838	96.523	....
Nov.	110.921	89.236	99.118	....
Dec.	104.268	92.35	98.989	....
Aver.	101.475	96.301	95.177	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)
Monthly Average Prices
(Cents per Pound)

	1956	1957	1958	1959
Jan.	104.768	101.347	92.653	99.351
Feb.	100.586	100.257	93.763	102.708
Mar.	100.524	99.476	94.363	103.042
Apr.	99.145	99.286	92.988	102.505
May	96.853	98.335	94.512	103.107
June	94.488	98.025	94.619	104.142
July	96.131	96.44	94.892	102.337
Aug.	98.924	94.159	94.976	....
Sept.	103.559	93.313	94.054	....
Oct.	105.716	91.848	96.455	....
Nov.	110.329	89.236	98.985	....
Dec.	104.00	92.34	98.96	....
Aver.	101.252	93.672	95.069	....

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb Flask

	1956	1957	1958	1959
Jan.	277.80	256.00	224.35	219.50
Feb.	270.29	256.00	229.39	219.50
Mar.	261.40	256.00	232.096	223.57
Apr.	267.22	256.00	233.06	239.52
May	267.675	256.00	229.48	245.86
June	260.69	256.00	229.00	241.64
July	256.06	256.00	230.25	236.74
Aug.	256.00	252.20	240.27	....
Sept.	256.00	248.58	241.12	....
Oct.	255.92	234.48	235.94	....
Nov.	255.13	228.33	230.05	....
Dec.	256.00	226.50	223.54	....
Aver.	261.71	248.51	230.96	....

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	—Sold or Used— Short tons	Value f. o. b. plant	Stocks end of month short tons
1957					
Total	....	1,647,714	1,579,035	.....	.....
1958					
April	189,999	124,999	127,608	63,222,858	187,390
May	187,390	126,357	130,160	62,816,641	183,557
June	183,557	115,326	130,787	63,091,679	168,096
July	168,096	118,541	134,083	64,726,335	152,554
August	152,554	125,416	132,765	64,611,494	145,205
September	145,205	124,714	146,870	71,641,275	125,049
October	124,274	139,836	139,908	68,881,146	124,202
November	124,202	140,962	126,619	62,133,129	138,545
December	138,545	152,201	145,125	70,946,494	145,721
Total	....	1,565,556	1,595,067	.....	.....
1959					
January	146,086	156,700	127,678	$62,375,824	175,108
February	175,108	142,116	133,397	65,668,578	183,827
March	183,827	157,189	181,839	82,304,609	159,177
April	159,177	155,213	182,930	90,070,280	131,960

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Sheet, Plate, Foil, Rod & Bar	Wire & Cable	Extruded Shapes & Tubing	Powder & Paste
1955 Total	2,805,500	1,542,368	365,391	812,311	35,854
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
Total	2,677,423	1,396,502	399,040	789,430	28,187
1958					
January	193,678	108,616	21,915	57,188	1,538
February	207,459	118,835	21,983	58,296	1,927
March	190,092	108,913	20,692	55,973	1,533
April	210,477	118,793	22,178	62,737	1,954
May	217,299	115,660	27,361	67,376	2,389
June	228,587	118,767	28,674	74,580	2,248
July	229,654	126,160	24,678	72,194	2,642
August	213,548	115,376	23,581	67,953	3,154
September	231,168	125,937	23,287	75,269	2,665
October	254,023	128,967	24,442	85,038	2,163
November	216,249	121,190	17,771	71,666	1,723
December	235,377	130,474	26,253	72,979	1,806
Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
January	235,463	132,361	26,480	70,309	2,246
February	230,733	131,564	21,740	71,364	2,028
March	271,642	161,285	21,940	81,276	2,578
April	293,554	166,942	25,468	93,475	3,178
May	320,786	184,664	28,532	99,308	3,641
June	341,245	195,476	30,156	107,038	3,901

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957 Total	751,656	144,121	232,326	369,086	...
1958					
February	50,695	9,601	15,456	25,579	...
March	50,547	9,311	15,255	25,918	...
April	44,948	9,531	13,369	21,956	...
May	44,093	9,312	13,648	21,091	...
June	40,701	8,644	13,679	18,292	...
July	38,818	8,658	12,342	17,714	...
August	45,034	9,034	14,426	21,505	...
September	52,796	10,261	16,241	26,254	...
October	55,699	10,932	17,189	27,511	...
November	55,793	10,539	16,942	28,264	...
December	59,487	10,874	18,970	29,579	...
Total	596,790	117,421	186,949	292,599	...
1959					
January	62,927	10,907	20,606	21,349	...
February	62,846	10,627	21,127	31,021	...
March	73,351	12,412	26,964	33,949	...
April	72,976	12,700	26,153	33,992	...
May	68,279	11,974	25,283	30,893	...

Virgin Aluminum

Ingot (30 lb.) 99½% Plus, Delivered

Monthly Average Prices

(Cents per pound)

	1956	1957	1958	1959
Jan.	24.40	27.10	28.10	26.80
Feb.	24.40	27.10	28.10	26.80
Mar.	24.60	27.10	28.10	26.80
Apr.	25.90	27.10	26.10	26.80
May	25.90	27.10	26.10	26.80
June	25.90	27.10	26.10	26.80
July	25.90	27.10	26.10	26.80
Aug.	26.70	28.10	26.77	....
Sept.	27.10	28.10	26.80	....
Oct.	27.10	28.10	26.80	....
Nov.	27.10	28.10	26.80	....
Dec.	27.10	28.10	26.80	....
Aver.	26.008	27.517	26.889	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1956	1957	1958	1959
Jan.	2,188	2,130	1,271	1,271
Feb.	1,901	2,522	1,280	1,691
Mar.	1,946	2,388	1,398	1,717
Apr.	2,279	2,511	1,479	2,089
May	2,462	2,230	1,443	1,644
June	2,302	1,881	1,709	1,946
July	2,002	1,428	1,227	....
Aug.	2,523	1,540	1,823	....
Sept.	2,031	1,501	1,807	....
Oct.	861	1,453	1,983	....
Nov.	2,141	1,230	1,662	....
Dec.	2,452	1,102	1,622	....
Total	24,975	21,915	18,702	....

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1956	1957	1958	1959
Jan.	170.00	170.00	155.00	145.00
Feb.	170.00	170.00	155.00	145.00
Mar.	170.00	170.00	155.00	145.00
Apr.	170.00	170.00	155.00	120.00
May	170.00	170.00	155.00	120.00
June	170.00	170.00	155.00	120.00
July	170.00	170.00	155.00	120.00
Aug.	170.00	170.00	155.00	....
Sept.	170.00	170.00	152.60	....
Oct.	170.00	170.00	145.00	....
Nov.	170.00	170.00	145.00	....
Dec.	170.00	166.40	145.00	....
Aver.	170.00	169.70	152.30	....

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies OPEN HEARTH Net tons	% of capacity	BESSEMER Net tons	% of capacity	ELECTRIC Net tons	% of capacity	TOTAL Net tons	% of capacity	Calculated weekly production, all companies (net tons)
1954 Total ..	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1956 Total ..	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2	115,216,149	89.8	2,203,828
1957 Total	101,657,776	87.0	2,475,138	54.9	8,582,082	71.3	112,714,996	84.5	2,161,776
1958									
January	6,085,124	58.6	121,338	35.5	547,450	44.8	6,753,912	56.1	1,524,585
February ...	5,252,112	56.0	81,597	26.4	448,614	40.6	5,782,373	53.6	1,445,581
March	5,598,944	53.9	122,317	35.7	533,361	43.6	6,254,622	52.3	1,412,000
April	4,875,619	48.5	109,433	33.1	547,939	46.3	5,532,991	47.8	1,289,741
May	5,602,123	53.7	110,366	32.3	588,670	48.2	6,301,159	52.7	1,422,384
June	6,378,942	63.4	88,125	26.6	660,413	55.8	7,127,480	61.6	1,661,417
July	5,712,587	55.0	114,218	33.4	593,600	48.6	6,420,405	53.7	1,452,580
August	6,481,815	62.4	134,135	39.3	670,383	54.8	7,286,003	61	1,644,696
September ..	6,769,660	67.3	103,194	31.2	737,518	62.3	7,610,372	65.8	1,778,124
October	7,795,541	75.0	148,458	43.4	873,779	71.5	8,817,278	73.8	1,990,469
November ..	7,572,555	75.3	145,867	44.1	850,896	71.9	8,569,318	74.1	1,997,510
December ...	7,764,000	74.7	117,000	34.2	832,000	68.1	8,793,000	72.9	1,971,000
Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4	85,257,363	69.6	1,635,162
1959									
January	8,280,985	77.1	120,005	39.5	729,675	63.7	9,317,385	74.3	2,103,247
February	8,540,000	88.0	129,000	47.0	757,000	73.1	9,603,000	84.8	2,401,000
March	10,216,474	95.1	184,892	60.9	929,784	81.1	11,567,745	92.3	2,611,229
April	9,884,332	95.0	196,000	66.2	964,850	87.0	11,281,220	93.0	2,629,818
May	10,117,968	94.2	200,887	66.1	1,024,401	89.4	11,600,581	92.5	2,618,441
June	9,521,053	91.6	185,794	63.2	941,056	84.8	10,907,634	89.9	2,542,572
July	4,540,000	42.2	66,000	21.7	533,000	46.5	5,233,000	41.7	1,184,000

Blast Furnace Output

(American Iron and Steel Institute)

	net tons Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
1950				
Tul. Yr.	64,810,272	673,896	65,484,168	91.5
1951				
Tul. Yr.	70,487,880	745,881	71,232,761	98.3
1952				
Tul. Yr.	61,828,665	629,926	62,158,591	84.2
1953				
Total ..	74,987,721	855,038	75,842,759	95.5
1954				
Total ..	58,119,882	568,735	58,688,117	71.6
1955				
Total ..	77,114,073	885,758	77,800,831	92.7
1956				
Nov. ..	6,977,457	58,614	7,036,091	100.1
Dec. ..	7,268,743	65,841	7,334,584	101.0
Total ..	75,301,134	664,341	75,965,475	88.9
1957				
Jan.	7,209,547	72,826	7,282,373	98.8
Feb.	6,596,133	61,973	6,658,106	100.0
Mar. ..	7,179,160	67,779	7,246,879	98.3
Apr. ..	6,810,102	60,784	6,870,886	96.3
May ..	6,879,881	65,566	6,945,447	94.2
June	6,593,326	66,266	6,659,592	93.3
July	6,625,901	66,031	6,691,932	90.8
Aug. ..	6,719,763	61,988	6,781,751	92.0
Sept. ..	6,569,074	58,837	6,627,911	92.9
Oct. ..	6,454,450	65,028	6,519,478	88.4
Nov.	5,711,242	68,637	5,779,879	81.0
Dec.	5,212,624	69,175	4,854,444	62.8
Total ...	78,557,011	782,660	79,339,671	91.4
1958				
Jan.	4,785,269	69,175	4,854,444	62.8
Feb.	4,016,276	47,953	4,064,229	58.2
Mar.	4,418,778	45,175	4,463,953	57.8
April ..	3,787,907	39,302	3,827,209	51.2
May ...	4,048,328	25,468	4,073,796	52.7
June ...	4,396,285	26,463	4,422,748	59.1
July ...	4,277,515	26,668	4,304,183	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.0
Nov.	5,907,888	39,275	5,946,163	79.5
Dec.	6,025,385	47,505	6,072,890	78.6
Total ..	57,298,644	465,456	57,298,644	63.5
1959				
Jan.	6,260,395	48,572	6,211,823	77.9
Feb.	6,047,398	45,274	6,192,672	85.3
March ..	7,461,760	48,291	7,510,051	93.4
April ..	7,338,372	54,234	7,392,606	95.0
May ...	7,683,759	64,237	7,747,996	96.4
June	7,231,631	58,315	7,289,946	93.7

Steel Castings Shipments

(Bureau of Census)

	(Short Tons) Total	For Sale	For Own Use
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
Total ..	1,184,096	880,158	303,938
1955			
Total ..	1,530,694	1,166,706	363,988
1956			
Total ..	1,931,987	1,512,290	416,697
1957			
Apr. ...	162,498	124,549	37,949
May ...	164,575	125,431	39,144
June ...	153,647	119,353	34,294
July ...	122,018	90,037	31,981
Aug. ...	145,926	111,080	34,846
Sept. ..	139,002	105,611	33,391
Oct. ...	146,397	113,216	33,181
Nov. ...	127,115	98,436	28,679
Dec. ...	120,787	92,125	28,662
Total ..	1,766,191	1,261,301	406,444
1958			
Jan. ...	120,722	94,717	26,005
Feb. ...	103,297	79,708	23,589
Mar. ...	106,233	82,195	24,038
Apr. ...	91,464	69,121	22,343
May	87,002	66,086	20,916
June ...	92,681	71,624	21,237
July ...	68,802	48,618	10,184
Aug. ...	80,886	59,816	21,070
Sept. ...	85,277	64,586	20,691
Oct. ...	95,389	73,367	22,022
Nov. ...	85,267	65,788	19,479
Dec. ...	103,800	81,360	22,440
Total ..	1,114,939	859,125	255,814
1959			
Jan. ...	105,392	82,693	22,709
Feb. ...	110,280	86,013	24,267
Mar. ..	131,317	103,848	27,469
Apr. ...	134,344	104,890	29,454
May ...	135,359	105,804	29,555

Galvanized Sheet Shipments

(American Iron & Steel Institute)

(Net Tons)

	1956	1957	1958	1959
Jan.	269,464	235,902	186,649	279,244
Feb.	272,997	205,048	167,627	281,637
Mar.	291,193	206,836	195,885	311,961
Apr.	266,728	198,585	206,368	328,759
May	272,741	206,657	231,318	317,059
June	279,058	239,037	277,180	350,333
July	*	167,247	239,883	.....
Aug.	276,048	186,790	253,263	.....
Sept.	256,803	183,952	258,723	.....
Oct.	278,637	212,886	290,157	.....
Nov.	255,135	190,380	253,909	.....
Dec.	239,173	159,363	266,472	.....
Total	2,957,991	2,392,637	2,828,848	.....

* Combined with August figures.

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

(Net Tons)

	—Hot Dipped— 1958	1959	—Electrolytic— 1958	1959
Jan.	31,455	30,304	474,359	417,210
Feb.	29,451	24,602	397,861	442,625
Mar.	36,794	46,706	419,102	597,408
Apr.	43,670	54,906	468,568	689,998
May	37,628	64,110	402,521	689,064
June	42,850	62,965	429,761	673,819
July	45,481	.....	422,776	.....
Aug.	46,037	.....	464,439	.....
Sept.	43,217	.....	525,739	.....
Oct.	60,261	.....	763,361	.....
Nov.	14,596	.....	113,134	.....
Dec.	15,842	.....	150,942	.....
Total	447,396	.....	5,040,198	.....

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week Beginning	1956	1957	1958	1959
Jan. 6...	97.6	98.4	56.1	76.2
Jan. 13...	98.6	96.4	57.0	73.6
Jan. 20...	99.0	96.6	55.5	74.6
Jan. 27...	100.4	97.6	54.0	72.6
Feb. 4...	99.3	97.1	54.0	76.9
Feb. 11...	99.1	97.7	53.5	83.8
Feb. 18...	98.8	97.8	50.9	83.7
Feb. 25...	98.8	96.0	54.6	88.5
Mar. 4...	99.3	97.1	53.1	90.3
Mar. 11...	100.0	93.8	52.4	92.0
Mar. 18...	100.6	93.5	52.5	92.9
Mar. 25...	99.5	92.4	50.6	92.9
Apr. 1...	96.6	90.6	48.6	93.2
Apr. 8...	97.7	90.3	48.5	93.3
Apr. 15...	100.9	90.4	46.8	93.8
Apr. 22...	100.2	88.7	47.9	93.5
Apr. 29...	100.5	87.0	47.8	94.2
May 6...	96.4	86.7	49.4	92.0
May 13...	95.2	84.2	52.3	92.9
May 20...	95.3	86.4	56.4	93.4
May 27...	97.3	88.0	58.1	93.6
June 3...	96.3	87.5	62.5	93.7
June 10...	96.7	86.5	84.0	92.0
June 17...	93.4	85.2	64.9	92.5
June 24...	93.0	84.0	61.7	87.8
July 1...	84.9	78.5	51.0	78.2
July 8...	12.3	78.7	53.4	79.5
July 15...	12.9	79.3	54.9	38.7
July 22...	14.6	79.4	57.3	12.9
July 29...	17.0	79.4	57.8	12.2
Aug. 5...	16.9	79.8	58.8	11.2
Aug. 12...	57.5	80.6	60.5	11.8
Aug. 19...	87.5	82.1	62.6	...
Aug. 25...	95.8	82.2	63.5	...
Sept. 2...	97.0	81.0	61.7	...
Sept. 9...	98.7	81.9	65.9	...
Sept. 16...	100.6	82.1	65.6	...
Sept. 23...	100.6	82.2	67.3	...
Sept. 30...	101.6	82.6	70.4	...
Oct. 7...	101.8	82.8	71.6	...
Oct. 14...	100.9	80.9	74.2	...
Oct. 21...	101.4	80.2	74.8	...
Oct. 28...	101.2	79.7	75.0	...
Nov. 4...	101.3	78.0	74.5	...
Nov. 11...	100.6	77.7	74.5	...
Nov. 18...	100.2	76.0	74.1	...
Nov. 25...	100.1	72.1	73.7	...
Dec. 2...	101.1	71.5	73.5	...
Dec. 9...	101.3	69.2	73.5	...
Dec. 16...	102.0	67.7	74.5	...
Dec. 23...	94.3	53.7	74.5	...
Dec. 30...	97.3	59.0	73.6	...

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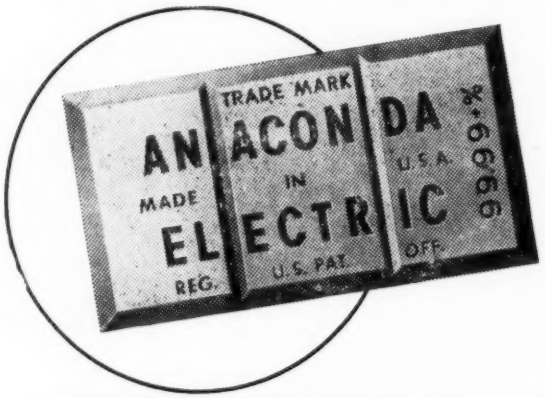

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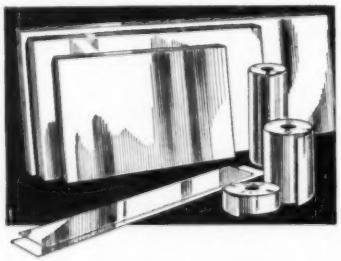

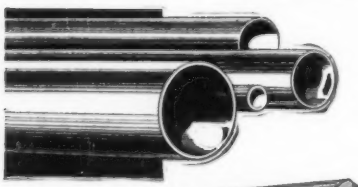

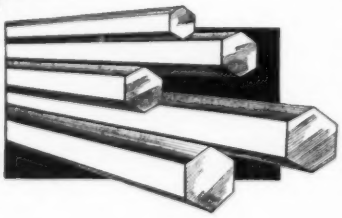

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